Ref. DDA/BWC/2000/CBM

CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION

Annual information exchange of States Parties
on confidence-building measures,
as agreed at the Third Review Conference
of the parties to the Convention

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ARGENTINA

20 April 2000

La Misión Permanente de la República Argentina ante las Naciones Unidas presenta sus atentos saludos al Departamento de Asuntos de Desarme de las Naciones Unidas y tiene el agrado de referirse a la aplicación de las Recomendaciones de la Tercera Conferencia de Examen de la "Convención sobre la Prohibición del Desarrollo, la Producción, y el Almacenamiento de las Armas Bacteriológicas (Biológicas) y Toxínicas y sobre su Destrucción".

En ese sentido, se informa que no se han producido modificaciones en las declaraciones en relación con las formuladas el año anterior.

Dicha información ha sido comunicada por el Instituto de Investigaciones Científicas y Técnicas de las Fuerzas Armadas que adjunta un formulario de Declaración: "Nada para Declarar o Nada nuevo para Declarar", en una (1) Foja, debidamente conformado.

VILLA MARTELLI, 18 de abril de 2000

SEÑOR DIRECTOR

Me dirijo a usted con referencia al Expte. DIGAN Nro. 409/00, en la que se solicita información acerca de las Declaraciones sobre Medidas de Fomento de la Confianza en el marco de la Convención para la Prohibición del Desarrollo la Producción y el Almacenamiento de las Armas Bacteriológicas y Toxínicas y Sobre su Destrucción.

Al respecto, informo que no se han producido modificaciones en las declaraciones en relación con el año anterior. A tal fin, agrego el formulario de Declaración "Nada para Declarar o Nada nuevo para Declarar" (UNA (1) foja) debidamente conformado.

Saludo a usted atentamente.

GEMER
7

[illegible]
PRESIDENTE DE CITEFA

MINISTERIO DE DEFENSA
CITEFA
ENTRO
SALIO 18 ABR 2000

AL SEÑOR DIRECTOR DE SEGURIDAD INTERNACIONAL, ASUNTOS NUCLEARES Y ESPACIALES DEL MINISTERIO DE RELACIONES EXTERIORES, COMERCIO INTERNACIONAL Y CULTO.
MINISTRO D. PEDRO VILLAGRA DELGADO
S / D

Formulario de declaración Nada Para Declarar Nada Nuevo Para Declarar

Medidas	**Nada para Declarar**	**Nada Nuevo Para Declarar**
A, part 1	☐	☑
A, part 2(i)	☐	☑
A, part 2(ii)	☐	☑
A, part 2(iii)	☐	☑
B, (i)	☐	☑
B, (ii)	☐	☑
C	☐	☑
D	☐	☑
E	☐	☑
F	☐	☑
G	☐	☑

Fecha
Estado Parte de la Convención : Argentina

LEONIDAS M. ANTONUCCI
CAPITAN DE CORBETA (RO)

AUSTRALIA

17 May 2000

The Permanent Mission of Australia to the United Nations presents its compliments to the Secretary-General of the United Nations and has the honour to refer to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction.

In this connection the Permanent Mission of Australia hereby submits Australia's annual return of information and data pursuant to the information and data exchange agreed to in the Final Declaration of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction.

REPORT BY AUSTRALIA IN ACCORDANCE WITH THE FINAL DECLARATION OF THE THIRD REVIEW CONFERENCE OF THE PARTIES TO THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION.

The Final Declaration of the Third Review Conference of the parties to the Convention contained a number of measures designed to strengthen the authority of the Convention and to enhance confidence in the implementation of its provisions. These included the introduction of new Confidence Building Measures.

Australia reports the following information in accordance with the Final Declaration, with the Annex to the final Declaration on Confidence Building Measures, and with the recommendations of the Ad Hoc Meeting of Scientific and Technical experts from States Parties to the Convention.

1. Declaration Form on Nothing to Declare or Nothing New to Declare

Measure	Nothing to Declare	Nothing New to Declare
A. part 1	☐	☐
A. part 2 (i)	☐	☐
A. part 2 (ii)	☐	☐
A. part 2 (iii)	☐	☑
B (i)	☐	☐
B (ii)	☐	☐
C	☐	☑
D	☐	☐
E	☐	☑
F	☐	☑
G	☐	☑

(Please mark the appropriate box(es) for each measure with a tick)
Date : **May 2000**
State Party to the Convention: **Australia**

2. Confidence Building Measure "A"

Part 1: Exchange of Data on Research Centres and Laboratories

Australia has three maximum containment units which meet the criteria for a "maximum containment laboratory" as specified in the 1983 WHO Laboratory Biosafety Manual. They are

- The Australian Animal Health Laboratory
- CSL Limited
- The National High Security Quarantine Laboratory

Data on these facilities is provided below in accordance with the Annex to the Final Declaration on Confidence Building Measures.

The National High Security Quarantine Laboratory (NHSQL) operates under the auspices of the Victorian Infectious Diseases Reference Laboratory (VIDRL) at Parkville, a suburb of Melbourne. Also, some Australian hospitals and university departments have containment units where diagnostic and research work is conducted.

[Form A, Part 1]

Exchange of Data on Research Centres and Laboratories[1]

1. Name(s) of facility[2]

Australian Animal Health Laboratory.

2. Responsible public or private organisation/company

Commonwealth Scientific and Industrial Research Organisation (government), and Department of Agriculture, Fisheries and Forestry (government).

3. Location and postal address

5 Port Arlington Road
GEELONG VICTORIA

PO Bag 24
GEELONG VIC 3220
AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. Joint funding by the Commonwealth Scientific and Industrial Research Organisation (government) and the Department of Agriculture, Fisheries and Forestry (government). Minor funding by private rural industry organisations.

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m2)

One maximum containment system and enclosure. Total floor space 11,000 m2, comprised of three main parts
a large-animal accommodation area, total floor area about 3,500 m2 made up of 29 rooms - each of these with a floor area of about 6 m2 - and with a service area, incinerator, and autopsy area.

A lab complex of total floor area about 3,500 m2 made up of three functional laboratory suites - each of these with a floor area of about 1, 100 m2 - and each comprised of six laboratories and four attached small-animal rooms. The laboratory suites are for diagnosis.; pathology and virology. There are attached service areas.

A common support area for glass washing, tissue culture, laundry and other services.

---

[1] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2] For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

(in A, Part I)

6. If no maximum containment unit, indicate highest level of protection

N/A

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

The high security laboratory works on research and diagnosis of animal diseases caused by organisms which largely are exotic to Australia, of which some may present a risk to laboratory workers. Organisms under investigation are pseudo-rabies (Aujeszky's Disease), bluetongue virus (attenuated vaccine strains), avian influenza virus (fowl plague), Newcastle disease virus (low to high virulence strains), rabies virus, hog cholera virus, Mycoplasma *mycoides* (bovine pleuropneumonia), *Brucella melitensis* and a range of other brucella strains, swine vesicular disease, vesicular exanthema virus, vesicular stornatitis virus (a range of isolates), transmissible gastroenteritis virus, African swine fever, rabbit haemorrhagic disease virus, porcine respiratory and reproductive syndrome virus, Japanese encephalitis virus, equine morbillivirus, Australian bat lyssavirus, a wide range of fish pathogens (both bacterial and viral), and the scrapie agent. All agents are of Risk Groups 2 and 3 (under WHO classification scheme) except equine morbillivirus, which has been classified as a biological Risk Group 4 agent (by Standards Australia, AS/NZS 2243.3:1995).

[Form A, Part I]

Exchange of Data on Research Centres and Laboratories[4]

1. Name(s) of facility[5]

CSL Limited.

2. Responsible public or private organisation/company:

CSL Limited.

3. Location and postal address:

45 Poplar Road
PARKVILLE VIC 3025
AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. Financed through trading operations.

5. Number of maximum containment units[6] within the research centre and/or laboratory, with an indication of their respective size (m2)

CSL has two high containment facilities. The first consists of two laboratories, one of 70m2 and the other of 50M2. The second facility is a single laboratory of approximately 60m2.

6. If no maximum containment unit, indicate highest level of protection

n/a.

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

The work of CSL is directed chiefly to the production of human plasma fractions and the production of vaccines for the prevention of disease in humans and in domestic animals. Some bacterial toxins are produced in order to make toxoids for prophylactic purposes. The diseases involved are cholera, brucellosis, tuberculosis, influenza, plague and typhus. Toxins are produced from a number of organisms such as tetanus, botulinum, perfringens and chauviae. The high containment laboratories are used for experiments to determine the efficacy of such vaccines and to produce Q-Fever vaccine.

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[4] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[5] For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[6] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

[Form A, Part 1]

Exchange of Data on Research Centres and Laboratories[7]

1. **Name(s) of facility[8]**

National High Security Quarantine Laboratory.

2. **Responsible public or private organisation/company:**

Department of Health and Aged Care (Commonwealth government), Department of Human Services (State government).

3. **Location and postal address:**

c/o Victorian Infectious Diseases Reference Laboratory
Private Bag 815
Carlton South
Victoria 3053
AUSTRALIA

4. **Source(s) of financing, of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

No Department of Defence funding. Commonwealth and State government funding only.

5. **Number of maximum containment units[9] within the research centre and/or laboratory, with an indication of their respective size (m2)**

One high security laboratory, containing 2 portable isolation units. Total area 90m2.

6. **If no maximum containment unit, indicate highest level of protection**

n/a

7. **Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate**

The diagnosis of possible imported cases of viral haemorrhagic fever or other quarantinable viral diseases such as yellow fever.

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[7] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[8] For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[9] In accordance with the 1983 WHO Laboratory Biosafety Manual or equivalent.

[Form A, Part 1]

The laboratory is also used for Rickettsial culture (both for diagnostic purposes and the production of diagnostic purposes and the production of diagnostic reagents), and in-vivo and in-vitro culture for other bacterial, fungal or viral category four human pathogens from clinical specimens, plus subsequent identification, antimicrobial susceptibility testing and further typing studies as may be necessary. Such pathogens include: Bacillus anthracis, Brucella spp, Francisella spp, Coccidioides, Blastomyces, Histoplasma, Paracoccidioides and exotic viruses causing haemorrhagic fevers or encephalitis.

Potentially dangerous pathogens are occasionally imported to allow diagnostic tests to be established, in accordance with the *Quarantine Act 1908* as stated in confidence building measure "E".

The clinical management of cases of quarantinable viral haemorrhagic fevers (VHFs) is provided in specially designated hospital units in each State and Territory. The laboratory provides support for the management of VHFs.

[Form A, Part 2(i)]

Part 2 : Exchange of Information on National Biological Defence Research and Development Programs

1. Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere?

Yes.

Australia has a modest research and development program in biological defence and arms control, which is detailed below.

[Form A, part 2 (ii)]

National Biological Defence Research and Development Program

Description

1. The objective of the program is to provide the Australian Government with an appropriate understanding of the issues pertinent to defence and protection against biological weapons. This understanding will support the ability of the Australian Defence Force to operate in support of the United Nations in parts of the world where biological weapons may be used. It will also enhance Australian ability to contribute to consideration of arms control verification measures in this field. The principal research activities are concerned with the detection of biological species that have been identified as potential biological warfare agents, and the characterisation of toxins that are threats in terms of both the Biological and Chemical Weapons Conventions. It includes studies on mechanisms of actions of toxins, and on the detection and analysis of toxins and inactivated organisms. The Australian program is concerned with diagnostic techniques, detection, treatment, toxicology, physical protection (in conjunction with chemical protection) and decontamination.

2. The program is funded solely by the Australian Department of Defence, with an allocation for the current financial year (July 1999-June 2000) of A$900,000. Some expenses incurred in a collaborative project with AMBRI (see section 5 below) are meet by AMBRI - ca. $20 000, for 99/00.

3. Yes, work is contracted to academic institutions and non-defence facilities.

4. 24%

5. The program includes collaborative projects with the Australian Membrane and Biotechnology Research Institute (AMBRI) to develop a biosensor technology for rapid detction of BW agents. The national program funds AMBRI for a project related to bioaeresol monitoring. DSTO also collaborates with AMBRI for development of rapid diagnostic capability. AMBRI receives funds from the United States Defense Advanced Research Projects Agency for this.

6. The organisational structure is as follows. There is a single active research cell operating within the Department of Defence within the heirarchy represented below.

Defence Department
|
Defence Science and Technology Organisaiton
|
Aeronautical and Maritime Research Laboratory
|
Combatant Protection and Nutrition Branch
|
Biological Defence Research

7. A declaration in accord with Form A, part 2 (iii) follows.

[Form A, part 2 (iii)]

Facilities

There is one facility

1. **Name** Combatant Protection and Nutrition Branch

2. **Location**

Address

Aeronautical and Maritime Research Laboratory
PO Box 4331
Melbourne, 3001 Australia

Physical Location

Cordite Avenue
Maribyrnong
Victoria, Australia

3. **Floor Area**

BL2	50 square metres
BL3	nil
BL4	nil

4. **Personnel**

(i) Total of 9 staff years effort for the combined biological defence and arms control programs, with contributions from 12 personnel.
(ii) All are civilian
(iii) 11 scientists
1 technician
Nil engineers
Shared administrative and support staff
(iv) Biochemistry, molecular biology, microbiology, immunology, chemistry, pharmacology
(v) No - there are no contractor staff working on this program at the facility
(vi) Wholly financed by the Department of Defence, with some expenses incurred in the conduct of the collaborative project with AMBRI (see Form A, Part 2 ii, Section 5) met by AMBRI - ca. $20 000 for 99/00
(vii) Research funded at ca. A$700,000 per annum.
Development funded at ca. $200 000 for 99/00. No test funding.
(viii) Publication in scientific journals is encouraged, and staff are expected to maintain their professional status by such publication.
(ix) The publications are listed in Attachment 1.

5. **Description of Biological Defence Work**

General

No living pathogenic microorganisms are used in the investigations at AMRL at present. There are no outdoor studies involving the release of biological or any other type of aerosols.

Detection of biological entities recognised as potential biological warfare agents.

Immunological and gene probe techniques for rapid identification of BW agents are investigated. Antibodies are being developed for incorporation in ELISA and biosensor tests. Antibodies are being developed to ricin, *Yersina pestis*, *Coxiella burnetii* and *Bacillus anthracis*. Human or animal vaccine are used to raise antibodies against the microorganisms. No living, pathenogenic material is use in the work.

Gene probes and primers for use in PCR identifiication of BW agents are being developed/investigated. Studies have involved the use of DNA extracted from vaccine strains or purified DNA samples procured from external sources.

DSTO has a program to develop a field bioaerosol detector, for which AMBRI receives funding.

Physical methods for rapid detection of bioaerosols.

Methods of particle characterisation for provision of rapid warning of a bioaerosol hazard are being assessed.

Treatment/Toxicology

Cultured human lung cells are being developed as a test bed for examining potential therapeutic compounds against toxin agents. Compounds for treatment of ricin intoxication are currently being examined.

Detection of biological materail using physico-chemical methods.

Studies on detection of biological material using mass spectrometry and other physico-chemical methods are being conducted to determine their utility for field detection of biological agents and BWC verification procedures.

Australia

Attachment 1 - Publications

1. Dawson, R.M., Paddle, B.M and Alderton, M.R. (1999). Characterisation of the Asialofetuin Microtitre Plate-binding Assay for Evaluating Inhibitors of Ricin Lectin Activity. *Journal of Applied Toxicology*, 19, 307-312.

2. Hughes, L. (1999) Quartz crystal microbalances and their use in DNA detection. *AMRL Vacation Scholar Thesis*. DSTO Aeronautical and Maritime Research Development.

3. Kok, T.*, Anderson, J. *, Krishna, G. *, Odgers, G.*, Pietra, S.*, Chowdhuri, R.*, Alderton, M., Williamson, D.*, and Osman, P.*, (2000) Rapid detetcion of *Y. pestis* and recombinant F1 antigen with an ion channel switch biosensor. In preparation.

4. MacKinnon, P.J., and Alderton, M.J. (2000) An investigation into the degradation of the plant toxin, ricin, by sodium hypochlorite. *Toxicon* 38, 287-291.

5. A Duncan*, R Matthews, R lennane*, K Logan* and M Coxhead*, "Trial Visit to an Australian Commercial Facility", report presented to the 15th session of the BWC Ad Hoc Group, July 1999.

6. Tilley, R.I. Hazardous Concentrations of Airborne Anthrax Spores. *DSTO-TN-0212*. DSTO Aeronautical and Maritime Research Laboratory.

* External to DSTO

3. CONFIDENCE BUILDING MEASURE "B"

Exchange of Information on Outbreaks of Infectious Diseases and Similar Occurrences caused by Toxins

Australia has had no outbreaks of infectious diseases and similar occurrences caused by toxins, that deviate from the normal pattern. For that reason there is a Form B (i), but no Form B (ii), attached under this confidence-building measure.

Human diseases

The Australian Department of Health and Family Services has overall responsibility for national disease surveillance. The National Centre for Disease Control of the Department routinely receives diagnostic data from key medical laboratories throughout Australia.

Each Australian State and Territory has legislation which requires doctors, hospitals and/or laboratories to report the occurrence of certain diseases, known as "notifiable diseases". Under the auspices of the Communicable Diseases Network of Australia New Zealand (the Network), the State and Territory health authorities provide data on an agreed set of notifiable diseases to the Australian Department of Health and Family Services. The data is collated by the Department and published each fortnight in the *Communicable Diseases Intelligence* and includes 'notifiable diseases' statistics. *Communicable Diseasese Intelligence* is sent to the Worl d Health Organisation, and is distributed to approximately 3 400 health professionals and researchers both nationally nad internationally.

The Network meets fortnightly by teleconference. It provides a forum for information exchange on communicable disease activity in Australia and New Zealand and enables Federal and State health authorities to cooperate in taking prompt action to control outbreaks.

Animal diseases

Within Australia's federal constitutional structure of government, State Governments have responsibility for animal health. The attached animal diseases return relates to outbreaks of animal diseases as reflected in Australian reporting to the Office International des Epizooties (OIE) and the Food and Agriculture Organisations (FAO).

Plant diseases

Within Australia's federal constitutional structure of government, State Governments have responsibility for plant health. Although there is no formal nation-wide mechanism for reporting occurrences of plant diseases the National Office of Animal and Plant Health has recently started to maintain a database of reports of new plant diseases.

Background Information on Outbreaks of Reportable Infectious Diseases:

In accordance with the requirements agreed at the Third Review Conference, a summary table of notifiable diseases for Australia for 1999 is attached as Form B(i). There are no reportable diseases for plants. Form B(i) reflects new plant diseases that were reported to the National Office of Animal and Plant Health during 1999. Some of these have probably been in Australia for some years but have been undetected.

[Form B (i)]

Background Information on Outbreaks of Reportable Infectious Diseases

(A) Human diseases

Nationally Notifiable Communicable Diseases in Humans 1994 - 1999

	Number of cases per year					
Diseases	1994	1995	1996	1997	1998	1999^{P}
AIDS	948	786	641	311	265	139
HIV	1033	944	926	787	721	660
Anthrax	NN	NN	NN	NN	NN	NN
Ross River virus infection	3960	2536	7782	6683	3079	4386
Barmah Forest virus infection	0	488	789	704	556	629
Dengue	17	32	43	210	560	124
Australian encephalitis	0	0	0	0	2	0
Arbovirus (NEC)	607	488	99	122	84	67
Botulism	0	0	0	0	1	0
Brucellosis	37	31	38	41	45	52
Campylobacter infection	10252	11140	11883	11848	12997	12745
Chancroid	0	2	1	1	1	0
Chlamydial infection	6357	6236	7319	9126	11272	13897
Cholera	3	5	4	3	5	4
Diphtheria	0	0	0	0	0	0
Donovanosis	114	85	46	45	36	16
Gonococcal infection	2911	3174	3823	4689	5293	5528
Heamophilus influenzae type b	176	77	52	53	35	41
Hepatitis A	1873	1602	2150	3076	2530	1537
Hepatitis B (incident)*-	328-	346-	194	247	265	311
Hepatitis B (unspecified)	642	1534	6136	7114	6715	7210
Hepatitis C (incident)*	42-	90-	40	81	348	345
Hepatitus C (unspecified)	8898	9564	9060	19689	19661	20754
Hepatitis (NEC)	49	28	18	6	4	0
Hydatid disease**	56	47	46	61	46	30

NA - not available
NN - not notifiable
NEC - not elsewhere classified
* Prior to 1994 the incident and other cases are not distinguished
** Not notifiable in all States and Territories
1997^{P} provisional figures only

Nationally Notifiable Communicable Diseases in Humans 1994 - 1999 (cont)

Diseases	Number of cases per year					
	1994	1995	1996	1997	1998	1999^p
Legionellosis	214	177	185	161	268	247
Leprosy	11	7	9	14	9	36
Leptospirosis	131	147	226	126	192	318
Lymphogranuloma venereum	2	1	0	0	0	0
Malaria	704	623	848	746	698	708
Measles	4915	1340	499	852	327	230
Meningococcal infections	382	391	426	499	466	563
Ornithosis**	90	182	79	46	56	88
Pertussis (whooping cough)	5689	4366	4335	10668	6054	4373
Plague	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0
Q fever	661	482	540	593	581	513
Rabies	0	0	0	0	0	0
Rubella	3312	4379	2755	1466	782	374
Salmonellosis	5507	6050	5767	7004	7892	7096
Shigellosis	734	743	661	799	609	539
Syphilis	2266	1848	1460	1293	1032	1876
Tetanus	15	5	2	8	7	3
Tuberculosis	1105	1194	1097	1008	1303	848
Typhoid	42	56	82	77	75	69
Viral haemorrhagic fever	0	0	0	0	0	0
Yellow fever	0	0	0	0	0	0
Yersiniosis	418	314	268	245	208	145

NA - not available
NN - not notifiable
NEC - not elsewhere classified
** Not notifiable in all States and Territories
1997^p provisional figures only

In 1996, the first case of human infection with a novel lyssavirus was reported. The patient died after developing encephalitis and was shown to have been infected with the lyssavirus, which had recently been discovered in several species of bat native to Australia. Although the source of infection was not identified, it is most likely that the patient, who handled bats regularly, was bitten or scratched by an infected animal. Further information is provided in the return on animal diseases. It should be noted that, although data is limited at this stage, available evidence is that this virus has probably been present in Australia for many years.

[Form B (b)]

Animal Diseases — 2000

I. General comments on changes in the animal health activities of the veterinary services

A major review of Australia's animal health system was undertaken in 1997 to define strategic priorities for the next five years. A plan, covering 1998-2003, has been developed to deliver defined core animal health activities. Strategies and actions proposed to achieve a shared vision for Australia's animal health include: legislative and administrative matters; involvement of the private sector; surveillance, diagnosis and reporting; animal welfare; food safety and residues; and emergency preparedness.

The review identified that, to achieve national outcomes efficiently, Australia's animal health service needs to have a clear focus in the broadest, collective sense. To achieve its purpose of protecting consumers, reducing the impact of disease on market access and production, and applying appropriate animal welfare standards, Australia's animal health services will have a number of core functions. These are to:

- protect domestic and other consumers from both real and perceived risks from residues, contaminants, and disease agents;
- enable continuous, competitive access to all export markets;
- provide harmonised, cost-effective and efficient service delivery arrangements throughout Australia;
- prevent entry and establishment of unwanted pests and pathogens;
- provide sufficient, well organised and succinctly presented information on Australia's animal health status to meet international, national and sub-national requirements;
- minimise the impact on production and trade of animal diseases;
- manage emergency and exotic disease and residue incidences in a cost effective manner with minimal disruption to trade; and
- meet the animal welfare standards of the community and trading partners.

In 1999 the Australian Animal Health Council, now called Animal Health Australia, a non-profit industry government limited company, has undertaken greater responsibility for the initiation ans management of a number of animal health activities covered in the core functions listed above. This process is in its early stage of development but is progressing rapidly.

II. Comments on selected Office International des Epizoties (OIE) List A diseases

Newcastle disease

The virulent 1998 Newcastle disease outbreak in Western Sydney and the 1999 outbreak at Mangrove Mountain on the NSW central coast have been contained. In late 1999 a further outbreak of Newcastle disease was confirmed in Western Sydney. This outbreak has been managed by vaccination. There is no evidence at this time of involvement of wild birds. A national survey of poultry flocks to identify the types and distribution of Newcastle disease viruses in Australia is being conducted.

III. Comments on selected Office International des Epizoties (OIE) List B diseases

Japanese encephalitis

There was no seroconversion of pigs to Japanese Encephalitis virus infection in 1999 from the Cape York Peninsular region or the Torres Strait islands.

IV. Comments on other diseases

No comment.

Table: Status of internationally reportable diseases that occur in Australia

Disease	OIE Code	Species	Occurrence
Acariosis of bees	B451	api	never occurred
Actinomycosis	C618	***	present
African horse sickness	A110	***	never occurred
African swine fever	A120	***	never occurred
American foulbrood	B452	api	present
Anthrax	B051	***	last occurrence 1999; limited range
Atrophic rhinitis of swine	B251	sui	present
Aujeszky's disease	B052	***	never occurred
Avian chlamydiosis	B312	avi	present
Avian encephalomyelitis	C853	avi	present
Avian infectious bronchitis	B301	avi	present
Avian infectious laryngotracheitis	B302	avi	present
Avian leukosis	C856	avi	present
Avian salmonellosis	C855	avi	present
Avian spirochaetosis	C854	avi	present
Avian tuberculosis	B303	avi	present
Blackleg	C614	bov	present
Bluetongue	A090	***	serological evidence in cattle; limited range; no clinical disease
Bonamiosis	B431	mol	present; limited range; Bonamia sp. reported in Victoria, Western Australia and Tasmania; *Bonamia ostreae* remains exotic
Botulism	C615	***	present
Bovine anaplasmosis	B101	bov	serological evidence only; limited range
Bovine babesiosis	B102	***	present; limited range
Bovine brucellosis	B103	***	last occurrence 1989; Australia declared freedom from bovine brucellosis in 1989
Bovine cysticercosis	B106	bov	present
Bovine genital campylobacteriosis	B104	***	present
Bovine spongiform encephalopathy	B115	bov	never occurred
Bovine tuberculosis	B105	bov	last occurrence 1999 present; limited range; Australia declared freedom from bovine TB on 31 December 1997, following a national program begun in 1970. Because of the nature of the disease, occasional cases are still reported
Bovine tuberculosis	B105	buf	last occurrence 1997 present; limited range
Caprine/ovine brucellosis (excluding *B. ovis*)	B152	o/c	never occurred
Caprine arthritis/encephalitis	B153	cap	present
Caseous lymphadenitis	C705	ovi	present

Classical swine fever	A130	***	last occurrence 1961
Coccidiosis	C620	***	present
Contagious agalactia	B154	ovi	present. *Mycoplasma agalactiae* has been isolated in Australia, but the Australian strains do not produce contagious agalactia in sheep
Contagious bovine pleuropneumonia	A060	bov	last occurrence 1967. Australia declared itself free of in 1973
Contagious bovine pleuropneumonia	A060	bul	never occurred
Contagious caprine pleuropneumonia	B155	cap	never occurred. Mycoplasma capricolum subsp. capripneumoniae (previously referred to as strain F38) is not present
Contagious equine metritis	B201	equ	last occurrence 1980
Contagious ophthalmia	C703	cap	present
Contagious ophthalmia	C703	ovi	present
Contagious pustular dermatitis	C701	cap	present
Contagious pustular dermatitis	C701	ovi	present
Dermatophilosis	B107	***	present
Distomatosis (liver fluke)	C621	***	present: limited range
Dourine	B202	equ	never occurred
Duck virus enteritis	B305	avi	never occurred
Duck virus hepatitis	B304	avi	never occurred
Echinococcosis/hydatidosis	B053	***	present
Encephalomyelitis (Eastern and Western)	B204	equ	never occurred
Enterotoxaemia	C704	***	present
Enterotoxaemia	C704	ovi	present
Enterovirus encephalomyelitis	B256	sui	never occurred
Enzootic abortion (ovine chlamydiosis)	B156	ovi	present
Enzootic bovine leukosis	B108	bov	present: limited range
Epizootic haematopoietic necrosis	B413	pis	serological evidence only: limited range
Epizootic lymphangitis	B203	equ	never occurred
Equine coital exanthema	C751	equ	never occurred
Equine infectious anaemia	B205	equ	present: limited range
Equine influenza	B206	equ	never occurred
Equine piroplasmosis	B207	equ	last occurrence 1976
Equine rhinopneumonitis	B208	equ	present
Equine viral arteritis	B211	equ	serological evidence only
European foulbrood	B453	api	present
Filariosis	C622	can	present
Foot and mouth disease	A010	***	last occurrence 1872
Foot-rot	C702	ovi	serological evidence only: limited range
Fowl cholera	B306	avi	present
Fowl pox	B307	avi	present
Fowl typhoid	B308	avi	last occurrence 1952
Glanders	B209	equ	last occurrence 1891
Haemorrhagic septicaemia	B109	bov	never occurred: strains of *Pasteurella multocida* do occur in Australia, but not the strains (6B or 6E [illegible]t cause haemorrhagic septicaemia
Haplosporidiosis	B432	mol	never occurred
Heartwater	B055	***	never occurred
Highly pathogenic avian influenza	A150	avi	last occurrence 1997
Highly pathogenic avian influenza	A150	fau	never occurred
Horse mange	B213	equ	never occurred
Horse pox	B210	equ	never occurred

Infect. bursal disease (Gumboro disease)	B309	avi	present; infectious bursal disease occurs in a mild form; Gumboro disease does not occur
Infectious bov rhinotracheitis	B110	bov	present
Infectious coryza	C851	avi	present
Infectious haematopoietic necrosis	B405	pis	never occurred; previously listed as 'last occurrence 1963' referring to a suspected occurrence in a quarantine facility; affected fish were destroyed and the diagnosis was not confirmed
Intestinal Salmonella infections	C619	***	present
Japanese encephalitis	B212	***	serological evidence only; limited range; seroconversions in sentinel animals occurred in 1998 only in Torres Strait islands and the tip of Cape York Peninsula; no seroconversions during the 1999 wet session in sentinel herds
Leishmaniosis	B501	can	never occurred
Leptospirosis	B056	***	present
Listeriosis	C611	***	present
Lumpy skin disease	A070	***	never occurred
Maedi-visna	B161	ovi	never occurred
Malignant catarrhal fever	B114	bov	present
Marek's disease	B310	avi	present
Marteiliosis	B434	mol	present; limited range; *Marteilia sydneyi* reported; *Marteilia refringens* remains exotic
Melioidosis	C613	***	present; limited range
Melioidosis	C613	ovi	present; limited range
Mikrocytosis (<i>Mikrocytos mackini</i>)	B436	mol	
Mucosal disease/Bovine virus diarrhoea	C652	bov	present
Mycoplasmosis (<i>M. gallisepticum</i>)	B311	avi	present
Myxomatosis	B351	lep	present
Nairobi sheep disease	B158	o/c	never occurred
New world screwworm (<i>C. hominivorax</i>)	B060	***	never occurred
Newcastle disease	A160	avi	last occurrence 1999; limited range
Nosemosis of bees	B454	api	present
Old world screwworm (<i>C. bezziana</i>)	B061	***	never occurred
Oncorhynchus <i>masou</i> virus disease	B415	pis	never occurred
Other clostridial infections	C616	***	present
Other pasteurelloses	C617	***	present
Ovine epididymitis (<i>Brucella ovis</i>)	B151	ovi	present
Ovine pulmonary adenomatosis	B157	o/c	never occurred
Paratuberculosis	B059	bov	serological evidence only; limited range
Paratuberculosis	B059	cap	serological evidence only; limited range
Paratuberculosis	B059	ovi	serological evidence only; limited range
Perkinsosis	B433	mol	last occurrence 1997; limited range; *Perkinsus olseni* last reported in 1997; *Perkinsus marinus* remains exotic
Peste des petits ruminants	A050	***	never occurred
Porcine brucellosis	B253	sui	present; limited range
Porcine cysticercosis	B252	sui	never occurred
Pullorum disease	B313	avi	present; limited range
Q fever	B057	***	serological evidence only; vaccination of abattoir workers and other at risk people
Rabbit haemorrhagic disease	B353	lep	present; Used as a biological control agent for wild rabbits
Rabies	B058	***	last occurrence 1867; on two recent occasions (in 1987 and 1990), human cases have been reported after acquiring the disease while outside Australia

Reproductive and respiratory syndrome	B257	sui	never occurred
Rift Valley fever	A080	***	never occurred
Rinderpest	A040	***	last occurrence 1923
Salmonellosis (<i>S.</i> abortusequi)	C754	equ	never occurred
Salmonellosis (<i>S.</i> abortusovis)	B153	ovi	never occurred. *Salmonella abortus ovis* was isolated in 1994 from two children in New South Wales but serological and bacteriological surveillance has not shown any evidence of infection in sheep
Scrapie	B160	cap	never occurred
Scrapie	B160	ovi	last occurrence 1952; imported animals, all of which were slaughtered
Sheep mange	C705	ovi	last occurrence 1896
Sheep pox and goat pox	A100	***	never occurred
Spring viraemia of carp	B404	pis	never occurred
Strangles	C753	equ	present
Surra (<i>Trypanosoma evansi</i>)	B215	equ	never occurred
Swine erysipelas	C811	sui	present
Swine vesicular disease	A030	sui	never occurred
Taura syndrome	B445	cru	never occurred
Theileriosis	B111	bov	serological evidence only; limited range; non pathogenic strains. *T. mutans* and *T. parva* are not present
Toxoplasmosis	C612	***	present
Transmissible gastroenteritis	B254	sui	never occurred
Trichinellosis	B255	***	present; *T. spiralis* is not present in Australia. *T. pseudospiralis* occurs in native fauna
Trichomonosis	B112	bov	serological evidence only; limited range
Trypanosomosis (tsetse-borne)	B113	***	never occurred
Tularemia	B352	lep	never occurred
Ulcerative lymphangitis	C752	equ	never occurred
Varroosis	B455	api	present; limited range. *Varroa jacobsoni* was identified in 1994 on Dauan Island in the Torres Strait; it does not occur on mainland Australia
Venezuelan equine encephalomyelitis	B216	equ	never occurred
Vesicular stomatitis	A020	***	never occurred
Vibrionic dysentery	C653	***	present
Viral haemorrhagic septicaemia	B401	pis	never occurred
Warble infestation	C654	bov	never occurred
Warble infestation	C654	fau	never occurred
White spot disease	B446	cru	never occurred
Yellowhead disease	B447	cru	never occurred

Codes for species

*** all relevant species; api bees; avi birds; bov cattle; buf buffalo; can dogs; cap goats; cru crustaceans; equ horses; fau fauna; lep rabbits; mol molluscs; ovi sheep; o/c sheep and goats; pis fish; sui pigs.

Disease	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Paw Paw Blackspot (*Asperisporium caricae*)								
Citrus canker (Xanthomonas campestris pv. citri)		X						
Potato cyst nematode (*Globoderra rostochiensis*)	X							
Strawberry angular leafspot (*Xanthomonas Fragariae*)		X						
Lupin Anthracnose (*Collectotrichum gloeosporioides VCG 2*)					X			
Gladiolus Rust (*Uromyces transversalis*)					X			
Raspberry crown rot (*Phtophthora fragariae* pv *rubi*)					X			
Sorghum Ergot (*Claviceps africana*)					X			
Fusarium oxysporum FSP cubense (race 4)						X		
Fire Blight (*Erwinia amylovora*)						X		

Mango Scab (*Elsinoe mangiferae*)	X	
Sugarcane smut (Ustilago scitaminea)		X
Sunflower black stem lesion (Anamporph: *Phoma macdonaldii* Telemorph: *Leptosphaeria lindquistii*)		X
Grapevine corkybark associated virus X		
Pseudocercospora anacardii X		
Bean leafroll luteovirus X		
Melampsora ricini Noronha X		

4. CONFIDENCE BUILDING MEASURE "C"

Policy on Publication of Results

The policy of the Defence Science and Technoloy Organisation is to publish results of a general scientific value in the open literature in scientific journals. Information that is more specialised and relevant particularly to defence is published in laboratory reports, which are unclassified and available to the public, unless they contain information that might prejudice the security of Australia or information that is commercial-in-confidence. It is envisaged that all results of the biological research will be either unclassified or "commercial-in-confidence"

The Defence Health Service Branch (DHSB) encourages the publication of scientific reviews in the literature in the biological defence area.

5. CONFIDENCE BUILDING MEASURE "D"

Promotion of Professional Contacts

Australia welcomes bona fide professional contact with other researchers in matters directly related to the Convention. Contact should be made with the facility described in Form A, part 2 (iii).

Active Promotion of Contacts

1. Planned international forums of exchange

a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 4 - "Medical Countermeasures Against Biological Warfare Agents"

b. Aeronautical and Maritime Research Laboratory (AMRL)

c. March 2001.

d. Canada

e. TTCP Biological Defence programs, collaborative research, advances in biotechnology.

f. Membership of TTCP CBD Group.

g. Dr M R Alderton, Aeronautical and Maritime Research Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone 03 96298420 Fax 03 9626 8410.

****

a. The Technical Cooperation Program (TTCP) CBD Group, Technical Panel 10 - Detection of Biological Agents

b. Aeronautical and Maritime Research Laboratory

c. September 2000

d. Canada

e. TTCP Biological Defence programs, collaborative research, advances in biotechnology

f. Membership of TTCP CBD Group

h. Ms V T Borrett, Aeronautical and Maritime Research Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone 03 9626 8467 Fax 03 9626 8999.

a. The Technical Cooperation Program (TTCP) CBD Group, Action Group 447 - BWC Related Analytical Methodologies.

b. Aeronautical and Maritime Research Laboratory

c. January 2000

d. United States

e. TTCP Biological Defence programs, collaborative research, advances in biotechnology

f. Membership of TTCP CBD Group

g. Mr R J Matthews, Aeronautical and Maritime Research Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone 03 9626 8460 Fax 03 9626 8999

a. Defense Advanced Research Projects Agency (DARPA), Biological Warfare Defense Principal Investigator Conference

b. DARPA

c. February 2001

d. United States

e. Advanced Diagnostics, unconventional pathogen countermeasures

f. Principal investigator of DARPA project.

g. Michael Goldblatt, Director, Defence Studies Office (DSO), United States, and Program manager, Unconventional Pathogen Countermeasures.

6. CONFIDENCE BUILDING MEASURE "E"

Declaration of Legislation, Regulations and Other Measures

Australia has the following Australian Government legislation, regulations and other measures to declare under this confidence-building measure.

Crimes (Biological Weapons) Act 1976

The Act, which is administered by the Attorney-General, makes it unlawful for Australians to develop, produce stockpile or otherwise acquire or retain microbial or other biological agents or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; or weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

The Act extends to the acts of Australian citizens outside Australia.

Contravention of the Act is an indictable offence.

Crimes (Biological Weapons) Regulations 1980

The Regulations specify the way in which substances acquired under the Act should be stored, disposed and analysed.

Customs Act 1901 and Customs (Prohibited Exports) Regulations

Under the Customs (Prohibited Export) Regulations the Minister for Defence controls, through a system of export licenses, the export of defence and related goods from Australia. These Regulations were amended in December 1996 to bring all export licensing requirements for defence and related goods under a single regulation - Regulation 13E. No substantial change was made to the regulations relating to the export licensing requirement for biological agents, toxins or equipment which could be used to assist a biological weapons program.

The Regulations require exporters to obtain a licence before proceeding to export certain listed items. These goods are listed in the "Defence and Strategic Goods List". Part 1 of this list includes biological agents designed or adapted to produce casualties in human beings; equipment designed or adapted for disseminating biological agents; goods designed or adapted for the detection, identification or defence against biological agents; and goods including software designed or adapted for the purposes of producing any of the previous items. Part 3 of the list includes human pathogens and toxins, animal pathogens, plant pathogens and equipment capable of being used to develop biological weapons.

[Form E cont.]

Quarantine Act 1908 and Regulations

The Act is designed to prevent the introduction into Australia of serious pests and diseases affecting humans, plants and animals. Accordingly, in conjunction with the Biological Control Act (see below) it controls rather than prohibits the import into Australia of all biological material.

The Act is administered by the Australian Quarantine and Inspection Service (AQIS) within the framework of the government's quarantine policy.

All biological agents require prior permission to import. Under the provisions of Section 13 of the Act, goods of biological origin, including human pathogenic micro-organisms and toxins, may only be imported into Australia if approval has been given by the Director of Human Quarantine.

In giving approval, the Director may require that the importer adhere to certain conditions or requirements, including, but not limited to, the storage, transportation, distribution and disposal of the goods, the use to which the goods may be put, and the personnel authorised to handle or use the goods.

Import conditions vary depending on the nature of the organisms, and on the risks involved. High risk organisms such as serious pathogens of humans, animals and plants which might be considered as potential biological weapons would only be permitted under the most stringent, high security conditions. Very few such imports are approved, and generally those would be for diagnostic research in preparation for emergency responses to specific serious exotic disease incursions.

Penalties for the importation of controlled goods without a permit, and for breaches of permit requirements, are severe and may include a fine, imprisonment or both.

Biological Control Act 1984 and Regulations

This Act is administered jointly by the Bureau of Rural Sciences and the Agriculture Industry Division of the Department of Agriculture, Fisheries and Forestry within the framework of the government's quarantine policy. It provides powers additional to those of the Quarantine Act in order to regulate the release of biological agents for the control of pests, diseases and weeds. It primarily covers issues of compensation for the release of a biological control agent.

Therapeutic Goods Act 1989 and Regulations

The Therapeutic Goods Administration of the Department of Department of Human Services and Health regulates therapeutic goods for human use under this Act. The Act covers the import and export of therapeutic goods and would include pathogenic micro-organisms where these are included in vaccines for human use.

Prior to initial supply for human use, products must be entered in the Australian Register of Therapeutic Goods. Vaccines are registerable products and undergo evaluation by the Therapeutic Goods Administration prior to entry in the Register.

(Form E cont.)

Weapons of Mass Destruction (Prevention of Proliferation) Act 1995 and Regulations

The Act is administered by the Department of Defence and complements the existing barriers contained in the Customs Act 1901 and the Customs (Prohibited Exports) Regulations. It prohibits the supply or export of goods, not otherwise controlled by the Customs Act 1901, or to provide services, in circumstances where the goods, or the services, will or may be used in, or assist the development, production, acquisition or stockpiling of biological weapons or their delivery systems. The prohibitions under the legislation apply where the person involved knows or suspects the connection with a biological weapons program.

The Act applies extraterritorially as well as within Australia, covering the activities of Australian citizens or residents, as well as bodies incorporated in Australia. It provides a mechanism for exporters to obtain written guidance from the Government on the risk of a particular planned transaction contributing to a biological weapons program.

Guidelines to prevent the inadvertent supply of biological weapons applicable plant, equipment, source cultures and expertise.

The Guidelines are a non-statutory, non-proliferation measure, developed by the Department of Foreign Affairs and Trade, to raise the awareness of industry and researchers about the risk of inadvertent involvement in the biological weapons programs of other countries. The Guidelines have been circulated to the biological industry, universities, relevant professional associations and government agencies.

[Form E]

Declaration of Legislation, Regulations and other Measures

Relating to	Legislation	Regulations	Other Measures	Amended Since Last Year
(a) Article I	Yes	Yes	No	No
(b) Exports of micro-organisms* and toxins	Yes	Yes	Yes	No
(c) Imports of micro-organisms* and toxins	Yes	Yes	No	No

*Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

7. CONFIDENCE BUILDING MEASURE "F"

Declaration of Past Activities in Offensive and/or Defensive Biological Research and Development Programs

1. **Date of Entry into force of the Convention for Australia**
   5 October 1977

2. **Past offensive biological R & D program**
   No

3. **Past defensive biological R & D Program**
   No, but see the explanatory statement attached.

Attachment to Form F

Declaration of past activities in offensive and /or defensive biological research and development programs

EXPLANATORY STATEMENT
RESEARCH AND DEVELOPMENT PROGRAMS RELATED TO BIOLOGICAL WARFARE AND DEFENCE IN AUSTRALIA SINCE 1 JANUARY 1946

Between 1 January 1946 and late 1994, Australia has had no R&D program specifically aimed at biological warfare or defence against it. However, some methods for protection against chemical warfare agents could also be used to protect against biological agents. As Australia has had a long standing R & D program to develop protection against chemical agents, it has, though only incidentally, also been involved in the development of means capable of offering some protection from biological weapons.

The Position at the end of World War II

During World War II, Australia acquired a protective capability against chemical and biological warfare (CBW), which included the equipping of military units with protective clothing, respirators, detection apparatus and decontamination equipment. This capability was associated with the threat of chemical warfare, as almost all of the major combatants possessed chemical weapons.

Australia had no biological weapons and knew little about them. While a need for some defence against them was generally perceived, no major specific steps were taken to achieve this. The tendency was to regard chemical and biological weapons as a single category of threat, with biological weapons treated as the lesser element.

The Situation from 1945 to the 1970s

In the late 1940's and 1950's Defence committees assessed the need for defence against biological agents. The view adopted was that if a biological threat arose, Defence authorities would co-opt staff from public health facilities who were trained in microbiology and biological sciences.

Since 1965 Australia has received limited information on biological defence from the United States of America, the United Kingdom, and Canada through the Technical Cooperation Program (TTCP). Under TTCP there is provision for collaborative research on biological defence, but Australia did not participated in that research.

During the 1960's and 1970's some research was conducted in an Australian Defence laboratory on toxins and venoms from Australian animals and plants. The research had no biological warfare focus, and was undertaken solely for the purpose of developing expertise in toxicology. The results of the research were published in scientific journals, contributing to the open scientific literature.

The Situation from 1970 to 1994

During this period the policy was to maintain a watching brief on developments in biological warfare defence research so that a competency could be maintained to advise on policy and to give direction to training for the Australian Defence Force. This competency was derived from open literature and from Australia's partners under The Technical Cooperation Program

(TTCP). No research on defence against toxins (or other biological warfare agents) was undertaken during this period.

Australia did, however, maintain an R&D program into chemical defence and the protective aspects of this program had some incidental common utility in biological defence.

The Current Situation

In 1994, it was recognised that Australia's knowledge of toxins as warfare agents needed to be strengthened if appropriate advice on defensive measures was to be given to the Australian Defence Force and in support of the country's arms control objectives. Consequently, the Government gave approval to commence a modest program of Research into defence against toxins as warfare agents.

It was also recognised that the Government needed advice on defence against biological weapons if it was to pursue its aims of strengthening the Biological Weapons Convention. Consequently, the policy of maintaining only a watching brief on BW defence research was modified to allow research into BW defence that did not utilise pathogenic reproducing organisms. Such activities as epidemiological studies, computer simulations and studies of the detection of toxins and other biological species can now be undertaken.

It is expected that this research will allow Australia to play a larger part in those Panels of TTCP that deal with BW defence research and obtain access to more information held by our cooperative partners.

Australia still maintains its active program into researching protective aspects of defence against chemical agents which could have some incidental common utility in defence against biological weapons.

Australia's most recent statement on Defence policy appeared in November 1994 in a document entitled *Defending Australia, Defence White Paper, 1994*. The policy on BW defence research is contained in the statement:

"The Government has a modest program of research into defence against nuclear, biological and chemical weapons".

8. CONFIDENCE BUILDING MEASURE "G"

Declaration of Vaccine Production Facilities
The only manufacturer licensed by the Australian government to produce vaccines for the protection of humans, (that is, licensed pursuant to the Therapeutic Goods Act 1989), is CSL Limited, 45 Poplar Road, Parkville, VICTORIA. The license requires the manufacturer to comply with principles of good manufacturing practice.

Declaration of Vaccine Production Facilities

1. Name of Facility

CSL Limited

2. Location (mailing address)

45 Poplar Road, PARKVILLE VICTORIA 3052, AUSTRALIA

3. General Description of the types of diseases covered

Vaccine products must be entered in the Australian Register of Therapeutic Goods prior to supply of the products for human use. CSL products which are registered are:

BCG vaccine
Cholera vaccine
Dipteria and tetanus vaccine
Cholera vaccine
Diptheria vaccine
Influenza vaccine
Meningococcal vaccine
Poliomyelitis vaccine
Pertussis vaccine
Tetanus toxoid vaccine
Triple antigen (diphtheria, tetanus, pertussis)
Typhoid vaccine
Q fever vaccine
Plague vaccine
Yellow fever vaccine

Further information on CSL is provided under confidence-building measure A at Form A part 1.

AUSTRIA

12 April 2000

The Permanent Mission of Austria to the United Nations presents its compliments to the Department for Disarmament Affairs and has the honour to transmit information as requested by the decisions of the Third Revision Conference 1991 of the Biological Weapons Convention.

As regards infectuous diseases covered by the Convention no such cases were reported in Austria. However, it should be noted that not all diseases listed in groups 2, 3 and 4 of the WHO classification are covered by relevant Austrian legislation.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the Information Exchange

Measure	Nothing to declare	Nothing new to declare
A. part 1	☐	☑
A. part 2(i)	☑	☐
A. part 2(ii)	☑	☐
A. part 2(iii)	☑	☐
B(i)	☑	☐
B(ii)	☑	☐
C	☑	☐
D	☑	☐
E	☐	☑
F	☑	☐
G	☐	☑

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 10 April 2000

State Party to the Convention AUSTRIA

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ BIOMEDICAL RESEARCH CENTER
IMMUNO AG, Uferstraße 15, A-2304, Orth a.d. Donau

2. Responsible public or private organization or company IMMUNO AG

3. Location and postal address INDUSTRIESTRASSE 67
1220 WIEN

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

PRIVATE

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m²)

4 BL4 4 x 19,17 m²
22 BL3 (Σ 578,08 m²)

6. If no maximum containment unit, indicate highest level of protection

BL4

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Hepatitis vaccine development
Development of HIV-vaccine
Chimpanzee quarters of HIV-infected chimps
Vaccinia virus as vector for expression studies
Handling and processing of large scale virus preparations

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared" in accordance with Form A, part 2 (iii).

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form E

Declaration of Legislation, Regulations and Other Measures

RELATING TO	LEGISLATION	REGULATIONS	OTHER MEASURES	AMENDED SINCE LAST YEAR
a) Development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I *)	[✓ YES] / NO	YES / NO	YES / NO	YES / NO
b) Exports of micro-organisms* and toxins	[✓ YES] / NO	[✓ YES] / NO	YES / NO	[✓ YES] / NO
c) Imports of micro-organisms* and toxins	[✓ YES] / NO **)	YES / NO	YES / NO	YES / NO

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* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention

*) for the purpose of prohibition

**) transport

Form G

Declaration of vaccine production facilities

1. Name of Facility: (ref. A part I)

2. Location (mailing address):

3. General description of the types of diseases covered:

BELARUS

10 April 2000

The Permanent Mission of the Republic of Belarus to the United Nations presents its compliments to the Department for Disarmament Affairs and has the honour to convey annual information of the Republic of Belarus regarding the implementation of its obligation under the Convention on the Prohibition of he Development, Production and Stockpiling of the Bacteriological (Biological) and Toxin Weapons and on Their Destruction.

На третьей Конференции по рассмотрению действия Конвенции было условлено, что все государства-участники представляют следующее объявление:

1. Объявление по форме: "Объявлять нечего" или "Нет никаких новых изменений, подлежащих объявлению" для использования при обмене информацией

Мера	Объявлять нечего	Нет никаких новых изменений, подлежащих объявлению
A, часть 1	☐	☑
A, часть 2 i)	☐	☑
A, часть 2 ii)	☐	☑
A, часть 2 iii)	☑	☐
B i)	☑	☐
B ii)	☑	☐
C	☐	☑
D	☑	☐
E	☐	☐
F	☑	☐
G	☑	☐

(Просьба применительно к каждой мере поставить галочку в соответствующем квадратике (квадратиках))

Дата 0 марта 2000 года

Государство - участник Конвенции Республика Беларусь

1. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "А"

Часть 1. Обмен данными об исследовательских центрах и лабораториях

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники продолжают осуществлять следующее:

"Обмен данными, включая наименования, местонахождения, сферу и общее описание деятельности, об исследовательских центрах и лабораториях, которые отвечают самым высоким национальным и международным нормам безопасности, установленным для использования в разрешенных целях биологических материалов, создающих большую опасность для отдельных лиц и групп людей, или специализируются на разрешенной биологической деятельности, имеющей непосредственное отношение к Конвенции."

Процедура

Третья Конференция по рассмотрению действия Конвенции условилась, что государствам-участникам следует предоставлять данные по каждому объекту, находящемуся на их территории или под их юрисдикцией или контролем где бы то ни было, который имеет любые лаборатории с максимальным уровнем защиты, отвечающие критериям для "максимально изолированных лабораторий", установленным в Руководстве ВОЗ по биологической безопасности лабораторий 1983 года, а также лаборатории, которые обозначены как уровень 4 биологической безопасности (БЛ4) или Р4, или эквивалентные стандарты

Форма А, часть 1

Обмен данными об исследовательских центрах и лабораториях [1]

1. Наименование объекта [2] Белорусский научно-исследовательский институт эпидемиологии и микробиологии МЗ РБ

2. Ответственная государственная или частная организация или компания Министерство здравоохранения Республики Беларусь

3. Местонахождение и почтовый адрес Республика Беларусь, 220050 г.Минск, ул.К.Цеткин, 4

4. Источник(и) финансирования объявляемой деятельности с указанием случаев, когда она полностью или частично финансируется министерством обороны

Министерство здравоохранения Республики Беларусь

5. Число максимально изолированных подразделений [3] в рамках исследовательского центра и/или лаборатории с указанием их соответствующих размеров (м²)

Две лаборатории (производственная площадь 130 м², уровень защиты Р4)

6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и/или токсинов

Ведутся исследования по поддержанию штаммовых запасов вирусов Ласса, Мачупо, Марбург, Эбола, ограниченные исследования в области экспериментальной химиотерапии лихорадки Ласса.

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[1] Изолированные подразделения, которые являются стационарными лечебными модулями, совмещенными с лабораториями, должны указываться отдельно.

[2] В отношении объектов, имеющих максимально изолированные подразделения, которые участвуют в осуществлении национальной программы исследований и разработок в области биологической защиты, просьба указать наименование объекта и сделать пометку "Объявлен в соответствии с формой А, часть 2 (iii)".

[3] В соответствии с Руководством ВОЗ по биологической безопасности в лабораторных условиях 1983 года или аналогичными нормами.

Часть 2. Обмен информацией о национальных программах исследований и разработок в области биологической защиты

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники должны осуществлять следующее:

В интересах повышения транспарентности национальных программ исследований и разработок в области биологической защиты государства-участники будут объявлять, осуществляют ли они такие программы или нет. Государства-участники согласились представлять на ежегодной основе подробную информацию о своих программах исследований и разработок в области биологической защиты, включая резюме целей и издержек деятельности, осуществляемой силами подрядчиков и в рамках других объектов. В том случае, если никакой программы исследований и разработок в области биологической защиты не осуществляется, представляется "нулевой" доклад.

Государства-участники будут делать объявления в соответствии с прилагаемыми формами, которые предусматривают представление следующей информации:

1) цели и районы осуществляемых исследований и разработок с [illegible] как [illegible] деятельности в следующих областях: профилактика, изучение патогенности и вирулентности, методы диагностики, аэробиология, обнаружение, лечение, токсинология, физическая защита, деконтаминация и другие связанные исследования;

2) используются ли подрядные или другие необоронные объекты, а также общая сумма средств, выделяемых на осуществление этой части программы;

3) организационная структура программы и отношения отчетности в связи с ней; и

4) следующая информация, касающаяся оборонных и других государственных объектов, на которых базируется программа исследований и разработок в области биологической защиты:

a) местонахождение;

b) площадь (м²) объектов, включая площадь, отведенную под каждую лабораторию уровня BL-2, BL-3 и BL-4;

c) общая численность работающих, включая лиц, которые работают по контрактам на основе полного рабочего дня свыше шести месяцев;

d) численность сотрудников, указанных в пункте c), по следующим категориям: гражданский персонал, военный персонал, научные работники, техники, инженеры, вспомогательный и административный персонал;

e) перечень научной специализации научного/инженерного персонала;

f) источник и размеры финансирования по следующим трем областям: исследования, разработки и испытание и оценка; и

g) политика в отношении публикаций и перечень общедоступных документов и докладов.

Форма А, часть 2 (i)

Объявление национальной программы исследований и разработок в области биологической защиты

Имеется ли национальная программа для проведения исследований и разработок в области биологической защиты на территории государства-участника, под его юрисдикцией или контролем где бы то ни было? Деятельность, осуществляемая в рамках такой программы, включала бы профилактику, изучение патогенности и вирулентности, методы диагностики, аэробиологию, обнаружение, лечение, токсинологию, физическую защиту, деконтаминацию и другие связанные исследования.

[✓ Да]/Нет

Если ответ на вопрос положителен, то нужно заполнить форму А, часть 2 (ii), в которой будет содержаться описание программы.

Форма А: часть III

Национальная программа исследований и разработок в области биологической защиты

1. Имеется программа защиты населения от наиболее распространенных на территории Республики Беларусь возбудителей инфекционных и паразитарных заболеваний. Цель и задачи программы - разработка средств диагностики, профилактики, лечения вирусных и бактериальных инфекций (включая карантинные и конвенционные заболевания), паразитарных заболеваний, а также разработка эффективных ситем эпиднадзора за ними.

2. Источник финансирования - за счет средств Министерства здравоохранения Республики Беларусь. Объем финансирования в 1998 году составил 53700 млн.рублей.

3. Основной исполнитель - Белорусский НИИ эпидемиологии и микробиологии МЗ РБ.

Форма А, часть 2 (ii)

Национальная программа исследований и разработок в области биологической защиты

II. Описание

1. Указать цели и финансирование программы и резюмировать основные исследования и разработки, осуществляемые в рамках программы. Рассматриваемые области должны включать: профилактику, изучение патогенности и вирулентности, методы диагностики, аэробиологию, обнаружение, лечение, токсинологию, физическую защиту, деконтаминацию и другие связанные исследования.

2. Указать общую сумму средств, выделяемых на программу, и источник финансирования.

3. Осуществляются ли какие-либо аспекты этой программы на основе подряда с промышленными предприятиями, учебными заведениями или на других необоронных объектах?

Да [✓ нет]

4. Если да, то какая часть всех средств, выделяемых на программу, расходуется на этих подрядных или других объектах?

5. Резюмировать цели и области исследований в рамках программы, осуществляемой подрядчиками и на других объектах за счет средств, указанных в пункте 4.

6. Представить диаграмму организационной структуры программы и схему отчетности (включая отдельные объекты, участвующие в осуществлении программы).

7. Представить объявление согласно форме А, часть 2 (iii), по каждому объекту, как государственному, так и негосударственному, значительная часть ресурсов которого используется для осуществления национальной программы исследований и разработок в области биологической защиты на территории государства, представляющего доклад, или под его юрисдикцией или контролем где бы то ни было.

Форма А: часть 2 (iii)

Национальная программа исследований и разработок в области биологической защиты

III. Объекты

Заполнить по одному бланку для каждого объекта, объявляемого в соответствии с пунктом 7 в форме А: часть 2 (i).

В случае совместно используемых объектов представить в отношении исследований и разработок в области биологической защиты только следующую информацию.

1. Каково наименование объекта?

2. Где он находится (указать адрес и географическое местонахождение)?

3. Площадь лабораторных помещений с разбивкой по уровню изоляции:

BL2 .... (м^{2})

BL3 .... (м^{2})

BL4 .... (м^{2})

Общая площадь лабораторных помещений .... (м^{2})

4. Организационная структура каждого объекта.

I) Общая численность сотрудников ....

II) Классификация сотрудников:

Военный персонал ....

Гражданский персонал ....

III) Классификация сотрудников по категориям:

Научные работники ....

Инженеры ....

Техники ....

Административный и вспомогательный персонал ....

IV) Перечислить научную специализацию научных/инженерных работников.

V) Работают ли на объекте подрядные сотрудники? Если да, то указать их примерную численность.

VI) Каков источник(и) финансирования деятельности, осуществляемой на объекте, с указанием тех случаев, когда деятельность полностью или частично финансируется министерством обороны?

VII) Каковы размеры финансирования по следующим разделам программы:

Исследования ....

Разработки ....

Испытания и оценка ....

VIII) Кратко охарактеризовать политику объекта в отношении публикаций.

IX) Представить перечень общедоступных документов и докладов, явившихся результатом работы, проделанной за предыдущие 12 месяцев. (Указать авторов, названия и полные выходные данные.)

5. Кратко охарактеризовать деятельность в области биологической защиты, осуществляемую на объекте, включая вид(ы) изучаемых микроорганизмов */ и/или токсинов, а также наружные исследования биологических аэрозолей.

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*/ Включая вирусы и прионы.

3. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "B"

- Обмен информацией о вспышках инфекционных заболеваний и аналогичных явлениях, вызванных токсинами

На третьей Конференции по рассмотрению действия Конвенции было установлено, что государства-участники продолжают осуществлять следующее:

"Обмен информацией о вспышках инфекционных заболеваний и аналогичных явлениях, вызванных токсинами, и обо всех других явлениях, которые, как представляется, отличаются от нормы по своему типу, развитию, месту или времени возникновения. Информация, представляемая относительно аномальных явлений, будет включать данные, как только они станут известными, о типе заболевания, примерной площади поражения и числе случаев заболевания".

Процедуры

Третья Конференция по рассмотрению действия Конвенции согласовала следующее определение:

"Вспышка заболевания, или эпидемия, представляет собой возникновение необычайно большого или неожиданного числа случаев заболевания или связанного со здоровьем явления в данном месте и в данное время. Число случаев, считающееся необычным, варьируется в зависимости от заболевания или явления и пораженного им контингента людей".

Кроме того, была сделана ссылка на следующие определения:

- "Эпидемия инфекционного заболевания определяется как возникновение необычайно большого или неожиданного числа случаев какого-либо известного заболевания или заболевания предположительно инфекционного происхождения в данном месте и в данное время. Это обычно быстро развивающаяся ситуация, требующая быстрого реагирования" (внутренний документ ВОЗ CDS/Mtg/82.1).

- "Появление в местности или регионе случаев заболевания, связанного со здоровьем специфического поведения или других связанных со здоровьем событий, которые явно выходят за пределы нормы. Местность или район и период времени, где и когда имеют место данные случаи, точно определяются. Число случаев, указывающих на эпидемию, варьируется в зависимости от агента, численности и категории населения, подвергающегося опасности заражения, предыдущего опыта или отсутствия подверженности заболеванию, а также времени и места явления; поэтому эпидемичность соотносится с обычной распространенностью данного заболевания в одной и той же области среди конкретного населения и в одно и то же время года. Единичный случай инфекционного заболевания, долгое время отсутствовавшего среди какого-либо населения, или первый случай какого-либо заболевания, не зафиксированного ранее в данной области, требуют немедленного сообщения о них и полного полевого исследования; два случая такого заболевания, совпавших по времени и месту происхождения, могут быть достаточным основанием для того, чтобы считать их эпидемией" (Last J.M., A Dictionary of Epidemiology, Oxford University Press, New Youk, Oxford, Toronto, 1983).

Третья Конференция по рассмотрению действия Конвенции достигла согласия относительно следующего:

1. При определении того, что следует считать вспышкой заболевания, государствам-участникам рекомендуется руководствоваться вышеупомянутыми определениями.

2. Поскольку в отношении того, что может представлять собой отклонение от нормы, не существует каких-либо общепризнанных стандартов, то государства-участники согласились в полной мере использовать действующие национальные системы оповещения о заболеваниях человека, а также, по возможности, о заболеваниях животных и растений и информационные системы, действующие в рамках ВОЗ, в целях ежегодного обновления исходной информации о заболеваниях, вызванных организмами, относящимися к группам риска II, III и IV, согласно классификации, содержащейся в Руководстве ВОЗ по биологической безопасности в лабораторных условиях 1983 года, появление которых в соответствующих областях не обязательно представляет собой отклонение от нормы*.

3. Обмен данными о вспышках заболеваний, которые, как представляется, отклоняются от нормы, имеет особое значение в следующих случаях:

- когда трудно точно определить причину такой вспышки или трудно выявить возбудителя болезни**;

- когда возможными возбудителями болезни являются организмы, относящиеся к группам риска III или IV, согласно классификации, содержащейся в Руководстве ВОЗ по биологической безопасности в лабораторных условиях 1983 года;

- когда возбудитель болезни обычно не встречается в данном регионе;

- когда развитие болезни носит необычный характер;

- когда вспышка заболеваний происходит вблизи исследовательских центров и лабораторий, охватываемых в соответствии с пунктом A обменом данными;

- когда возникают подозрения о возможном возникновении нового заболевания.

4. С целью укрепления доверия первоначальное сообщение о вспышке инфекционного заболевания или аналогичного явления, которое отклоняется от нормы, должно представляться сразу же после обнаружения такой вспышки и впоследствии дополняться ежегодными сообщениями.

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* Эту информацию следует представлять в соответствии с формой В 1.

** Условлено, что сюда могут входить организмы, которые приобрели патогенные свойства в результате использования таких методов молекулярной биологии, как генная инженерия.

С тем чтобы дать возможность государствам-участникам применять стандартную процедуру, Конференция решила, что для обмена первоначальной, а также ежегодной информацией следует использовать форму В (ii) в той мере, в какой такая информация известна и/или применима.

5. В целях расширения международного сотрудничества в области мирной бактериологической (биологической) деятельности и предотвращения или уменьшения возможности возникновения неясностей, сомнений и подозрений государства-участники призываются приглашать экспертов из других государств-участников для оказания помощи в ликвидации вспышки заболевания, а также благожелательно рассматривать такие приглашения.

Form B (1)

Background information on outbreaks of reportable infectious diseases

Disease	Number of cases per year				
	1993	1994	1995	1996	1997

Форма В (ii)

Информация о вспышках инфекционных заболеваний и аналогичных явлениях, которые, как представляется, отличаются от обычных явлений такого рода

1. Время обнаружения вспышки заболевания ....

2. Место и приблизительная площадь заражения ....

3. Вид заболевания/интоксикации ....

4. Предполагаемый источник заболевания/интоксикации ....

5. Возможный возбудитель (возбудители) болезни ....

6. Основные характеристики систем ....

7. Подробные симптомы в тех случаях, когда это применимо:

   - респираторные ....
   - кровеносные ....
   - неврологические/поведенческие ....
   - кишечные ....
   - дерматологические ....
   - нефрологические ....
   - прочие ....

8. Отклонение (отклонения) нормы по:

   - типу ....
   - развитию ....
   - месту возникновения ....
   - времени возникновения ....
   - симптомам ....
   - вирулентности ....
   - сопротивляемости лекарствам ....
   - трудности определения возбудителя (возбудителей) ....
   - наличию нетипичных переносчиков инфекции ....
   - прочим признакам ....

9. Приблизительное число первичных случаев ....

10. Приблизительное число всех случаев ....

11. Число летальных исходов ....

12. Развитие вспышки заболевания ....

13. Принятые меры ....

4. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ [illegible]

Поощрение публикации результатов и содействие использованию знаний

На третьей Конференции по рассмотрению действия Конвенции было решено, что государства-участники продолжают осуществлять следующее:

> "Поощрение публикации результатов биологических исследований, имеющих непосредственное отношение к Конвенции, в научных журналах, доступных для государств-участников, а также содействие использованию знаний в разрешенных целях [illegible] накопленных в ходе таких исследований".

Процедуры

Третья Конференция по рассмотрению действия Конвенции достигла согласия относительно следующего:

1. Рекомендуется, как правило, не засекречивать фундаментальные исследования в области биологических наук, в особенности имеющие непосредственное отношение к Конвенции, а также в максимально возможной мере воздерживаться, без ущерба для национальных и коммерческих интересов, от засекречивания прикладных исследований.

2. Государствам-участникам рекомендуется представлять информацию о своей политике в отношении публикации результатов биологических исследований с указанием, в частности, своей политики в отношении публикации результатов исследований, проводимых в исследовательских центрах и лабораториях, охватываемых в соответствии с пунктом A обменом информацией, а также публикации исследований о вспышках заболеваний, предусмотренных в пункте B, и представлять информацию о соответствующих научных журналах и других соответствующих научных изданиях, широко доступных для государств-участников.

3. Третья Конференция по рассмотрению действия Конвенции обсудила вопрос о сотрудничестве и оказании помощи в области обеспечения безопасности при работе с биологическими материалами, подпадающими под действие Конвенции. Она пришла к выводу, что этими вопросами занимаются и другие международные форумы, и высказалась в поддержку усилий, направленных на расширение такого сотрудничества.

СПИСОК НАУЧНЫХ ТРУДОВ
СОТРУДНИКОВ БелНИИЭМ, ОПУБЛИКОВАННЫХ В 1999

№ п/п	Наименование публикации	Вид публикации	Авторы	Где опубликовано, год, страницы (статьи, тезисы и т.д.). Кем, когда утверждено, № и дата приказа (для методических и технологических материалов)
1	Реассортантная вакцина Ласса-Мопейя: реальные успехи и перспективы	Ст.	Федоров Ю.[illegible] [illegible] В.[illegible] Титов Л.П. Бутенко А.А.	В сб.: Инфекция и иммунитет: Матер. Республиканской научно-практ. конф., посвященной [illegible] летию БелНИИЭМ, Минск, [illegible] декабря, 1999. С. 313-322
2	Изучение электрофоретической подвижности вирионных белков варианта вируса лимфоцитарного хориоменингита, устойчивого к действию 5-фторурацила	Тез.	Капитулец Н.Н. Сабынин В.М. Рустамова Л.М. Богданова Н.Л. Капитулец С.П. Петкевич А.С.	Там же. С. 358-360
3	Сероэпидемиологический анализ вирусного лимфоцитарного хориоменингита в Республике Беларусь	Тез.	Владыко А.С. Поповачева В.Н. Суркова Л.[illegible] [illegible] [illegible]	Мат-лы Респ. науч.-практ. конф., посвященной [illegible] летию БелНИИЭМ «Инфекция и иммунитет», Минск, 1999. С. [illegible]
[illegible]	Получение и предварительная характеристика рекомбинантных [illegible] капсидных белков Европейского и Азиатского [illegible] вируса [illegible]	[illegible]	Владыко А.С. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] Ткаченко Е.А.	Там же. С. [illegible]

5	Получение [illegible] рекомбинантного белка вируса [illegible] и предварительная оценка [illegible] антигенных свойств	Тез.	[illegible] Фомин И.К. Владыко А.С.	Там же. С. [illegible]
6	Оптимизация условий постановки ТФ ИФА к вирусу ЛХМ на основе рекомбинантного белка	Тез.	Хотловский И.В. Фомин И.К. Владыко А.С.	Там же. С. 328
7	Разработка иммуноферментной тест-системы для [illegible] диагностики ЛХМ на основе использования рекомбинантного антигена	Тез.	Владыко А.С. Фомин И.К. Зайцева В.Н.	[illegible] мед. [illegible] 1999г.
8	Получение рекомбинантного антигена вируса ЛХМ в E. Coli небольшого фрагмента S-сегмента в составе вектора pJC40	Тез.	Владыко А.С. Фомин И.К. Петлёнок Е.П.	Там же.
9	Получение в экспрессирующем векторе pJC40 и предварительная характеристика низкомолекулярных рекомбинантных пептидов иммунодоминантных доменов белка NP вируса ЛХМ	Тез.	Владыко А.С. Фомин И.К. Петлёнок Е.П.	Мат-лы Межд. семинара «Конверсия научных исследований в Беларуси в рамках деятельности МНТЦ». Минск, 1999. С.
10	Получение и [illegible] характеристика низкомолекулярного рекомбинантного белка вируса ЛХМ	Тез.	Владыко А.С. Фомин И.К. Петлёнок Е.П.	Там же. С. [illegible]
11	Получение и [illegible] характеристика рекомбинантных белков вируса [illegible]	Тез.	Владыко А.С. Фомин И.К. Петлёнок Е.П. [illegible] Лукашевич И.С. [illegible] А.П.	Мат-лы научн. конф. «Акт. проблемы вирусологии», посвященной [illegible]-летию академика М.А. Чумакова и

			Дмитриева [illegible] [illegible]	В полиомиелит[illegible] вирус[illegible] 1999 [illegible]
12	Lassa and Mopeia virus replication in human monocytes/macrophages and in endothelial cells: different effects on IL-8 and TNF-α gene expression	Ст.	Lukashevich I.S. Maryankova R.F. Vladyko A.S. Nashkevich N. Koleda S. Djavani M. Horejsh D. Voitenok N.N. Salvato M.S.	J. Med. Virol. 1999. 59. P. 552-560
13	Конструирование рекомбинантной плазмиды, [illegible] вирусспецифическую активность гена NP вируса Ласса	Тез.	[illegible] [illegible] [illegible]	Материалы [illegible] конференции [illegible] Петербург, 1999. С. 234
14	Пути преодоления формирования устойчивости вируса ЛХМ к химическим соединениям и лекарственным препаратам	Ст.	Богданова Н.Г. Бабынин Э.М. Рустамова Л.М. Титкевич А.С.	В сб. «Инфекция и иммунитет». Материалы Респ. Научн.-практ. конф., посвященной [illegible]летию БелНИИЭМ 9-10 декабря 1999 Минск. С.326-329
15	Формирование устойчивых к лекарственным средствам штаммов вируса лимфоцитарного хориоменингита	Тез.	Титкевич А.С. Рустамова Л.М. Богданова Н.Г. Бабынин Э.М. Калитулец Н.[illegible]	Там же. С. 362
16	Поиск эффективных иммуномодуляторов и химиопрепаратов при экспериментальной инфекции, вызванной вирусом ЛХМ	Тез.	Зуйкин Б.Е. Бабынин Э.М. Рустамова Л.М. Богданова Н.Г. Титкевич А.С.	Там же. С. [illegible]
[illegible]	Изучение особенностей формирования устойчивости вируса ЛХМ к противовирусным препаратам	Тез.	Бабынин Э.М. Рустамова Л.М. Богданова Н.Г. Калитулец [illegible] Зуйкин Б.Е.	Сб. «Достижения медицинской науки» 1999

5. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "D":

- Активное содействие контактам

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники продолжают осуществлять следующее:

> "Активное содействие контактам между учеными, другими экспертами и объектами, занимающимися биологическими исследованиями, которые имеют непосредственное отношение к Конвенции, включая обмены и посещения для проведения совместных исследований на взаимно согласованной основе".

Процедуры

Третья Конференция по рассмотрению действия Конвенции достигла согласия относительно следующего:

Для активного содействия профессиональным контактам между учеными, для содействия совместным исследовательским проектам и другим видам деятельности, нацеленным на предотвращение или уменьшение возможностей возникновений неясностей, сомнений и подозрений, и на расширение международного сотрудничества в области мирной бактериологической (биологической) деятельности государствам-участникам рекомендуется по возможности предоставлять информацию:

- о планируемых международных конференциях, семинарах, симпозиумах и аналогичных мероприятиях, посвященных биологическим исследованиям, имеющим непосредственное отношение к Конвенции,

- о других возможностях обмена учеными, проведения совместных исследований или других мероприятий с целью развития контактов между учеными, занимающимися биологическими исследованиями, имеющими непосредственное отношение к Конвенции.

Для того чтобы дать возможность государствам-участникам применять стандартизированную процедуру, третья Конференция по рассмотрению действия Конвенции согласилась, что для обмена информацией по этому пункту следует использовать форму D.

Форма D

Активное содействие контактам

1. Планируемые международные конференции, симпозиумы, семинары и другие аналогичные форумы по обмену

По каждому из таких мероприятий следует сообщать следующую информацию:

- название конференции, и т.д. ....
- проводящая мероприятие организация (организации), и т.д. ....
- время проведения ....
- место проведения ....
- основная тема (основные темы) конференции, и т.д. ....
- условия участия ....
- адрес, по которому следует обращаться для получения дальнейшей информации, и т.д. ....

2. Информация, касающаяся других возможностей

....

....

....

....

6. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "E"

- Объявление законодательства, правил и других мер

На третьей Конференции по рассмотрению действия Конвенции государства-участники согласились осуществлять следующее:

В качестве характеристики мер, которые они приняли для осуществления Конвенции, государства-участники объявляют, приняли ли они законодательство, правила или другие меры:

a) для запрещения разработки, производства, накопления запасов, приобретения или сохранения микробных или других биологических агентов или токсинов, оружия, оборудования и средств доставки, оговоренных в статье I Конвенции, в пределах их территории или в любом месте под их юрисдикцией или контролем;

b) в отношении экспорта или импорта микроорганизмов, являющихся патогенными для человека, животных и растений, или токсинов в соответствии с Конвенцией.

Государства-участники заполняют прилагаемую форму (форма E) и должны быть готовы по соответствующему запросу представить Департаменту Организации Объединенных Наций по вопросам разоружения или отдельному государству-участнику копии такого законодательства или правил или письменые сведения о других мерах. На ежегодной основе государства-участники указывают, также по прилагаемой форме, вносились ли какие-либо поправки в их законодательство, правила или другие меры.

Форма E

Объявление законодательства, правил и других мер

ПРЕДМЕТ	ЗАКОНОДА-ТЕЛЬСТВО	ПРАВИЛА	ДРУГИЕ МЕРЫ	ПОПРАВКИ, ВНЕСЕННЫЕ С ПРОШЛОГО ГОДА
a) Разработка, производство, накопление запасов, приобретение или сохранение микробных или других биологических агентов или токсинов, оружия, оборудования и средств доставки, оговоренных в статье I	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ
b) Экспорт микроорганизмов* и токсинов	[✓ ДА]/НЕТ	ДА/НЕТ	[✓ ДА]/НЕТ	ДА/НЕТ
c) Импорт микроорганизмов* и токсинов	[✓ ДА]/НЕТ	ДА/НЕТ	[✓ ДА]/НЕТ	ДА/НЕТ

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* Микроорганизмы, являющиеся патогенными для человека, животных и растений в соответствии с Конвенцией.

МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "F"

Объявление прошлой деятельности в рамках наступательных и/или оборонительных программ биологических исследований и разработок

В интересах повышения транспарентности и открытости государства-участники объявляют, участвовали ли они в каких-либо наступательных и/или оборонительных программах биологических исследований и разработок с 1 января 1946 года.

Если да, то государства-участники должны представлять информацию по таким программам в соответствии с формой "F".

Форма F

Объявление прошлой деятельности в рамках наступательных и/или оборонительных программ биологических исследований и разработок

1. Дата вступления в силу Конвенции для государства-участника

2. Прошлые наступательные программы биологических исследований и разработок:

   - ДА - [✓ НЕТ]
   - Период(ы) деятельности
   - Резюме исследований и разработок с указанием того, касалась ли осуществлявшаяся деятельность производства, испытаний и оценки, взятия на вооружение, накопления биологических агентов, программы уничтожения таких агентов и оружия и других связанных исследований.

3. Прошлые оборонительные программы биологических исследований и разработок:

   - ДА - [✓ НЕТ]
   - Период(ы) деятельности
   - Резюме исследований и разработок с указанием того, осуществлялась ли деятельность в следующих областях: профилактика, изучение патогенности и вирулентности, методы диагностики, аэробиология, обнаружение, лечение, токсинология, физическая защита, деконтаминация, - а также других связанных исследований, с указанием, по возможности, местонахождения.

G. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "G"

- Объявление объектов по производству вакцин

Для дальнейшего повышения транспарентности биологических исследований и разработок, связанных с Конвенцией, и расширения научно-технических знаний согласно положениям статьи X, каждое государство-участник объявляет все объекты, как государственные, так и негосударственные, находящиеся на его территории или под его юрисдикцией или контролем где бы то ни было, производящие вакцины, разрешенные государством-участником для защиты людей. Информация представляется по прилагаемой форме G.

Форма G

Объявление объектов по производству вакцин

1. Наименование объекта:

2. Местонахождение (почтовый адрес):

3. Общее описание видов охватываемых заболеваний:

BELGIUM

23 June 2000

Objet Application de la Convention sur l'interdiction de la mise au point, de la fabrication, du stockage des armes bactériologiques ou à toxines et sur leur destruction (BTWC)
Mesures de confiance en application de la résolution 46/35 A

J'ai l'honneur de vous transmettre, ci-joint, les informations relatives au sujet sous rubrique qui m'ont été communiquées par le Ministère belge de la Défense

- Partie 2 : Echange d'informations sur les programmes nationaux de recherche-développement en matière de défense biologique

A la troisième Conférence d'examen, il a été convenu ce qui suit :

Pour accroître la transparence des programmes nationaux de recherche-développement en matière de défense biologique, les Etats parties déclareront s'ils exécutent ou non de tels programmes. Ils sont convenus de fournir, annuellement, des renseignements détaillés sur leurs programmes de recherche-développement en matière de défense biologique, avec indication succinte des objectifs et des coûts des travaux menés par des contractants et dans d'autres installations. Si aucun programme de recherche-développement en matière de défense biologique n'est exécuté, il sera fourni un rapport "nul".

Les Etats parties fourniront des déclarations conformément aux formules jointes, qui invitent à fournir les renseignements suivants :

1. L'objectif et un résumé des activités de recherche-développement en cours, en indiquant si des travaux sont menés dans les domaines suivants : prophylaxie, études de pouvoir pathogène et de virulence, techniques de diagnostic, aérobiologie, détection, traitement, toxinologie, protection physique, décontamination et autres recherches apparentées;

2. L'utilisation éventuelle d'installations de contractants ou d'autres installations ne relevant pas de la défense et le total des fonds affectés à ce segment du programme;

3. Structure (organisation) du programme et ses relations hiérarchiques;

4. Les renseignements ci-après concernant les établissements gouvernementaux de défense et autres où est concentré le programme de recherche-développement en matière de défense biologique :

    a) Emplacement;

    b) Superficies (en m^2) des installations, notamment de celles qui sont imparties à chacun des laboratoires des niveaux de sécurité biologique BL2, BL3 et BL4;

    c) Le personnel (nombre total), y compris le personnel recruté sous contrat à plein temps pour plus de 6 mois;

    d) Les effectifs du personnel indiqué sous c) par catégorie : civils, militaires, scientifiques, techniciens, ingénieurs, personnel auxiliaire et administratif;

    e) Une liste des disciplines scientifiques représentées au sein du personnel scientifique et des ingénieurs;

    f) La source et le niveau de financement des trois secteurs suivants : recherche, développement, essai et évaluation;

    g) La politique en matière de publication et une liste des mémoires et rapports accessibles au public.

Formule A - Partie 2 i)

Déclaration de programme national de recherche-développement en matière de défense biologique

OUI

Programme de recherche portant sur les aspects biophysiques des contremesures dirigées contre les biotoxines

Formule A - Partie 2 i)

Déclaration de programme national de recherche-développement en matière de défense biologique

(OUI)

Programme de dévelopement portant sur les techniques de diagnostic rapide de germes infectieux et sur les modifications d'expression de leurs déterminants de résistance aux antibiotiques

Formule A - Partie 2 i)

Déclaration de programme national de recherche-développement en matière de défense biologique

L'Etat partie applique-t-il un programme national de recherche-développement en matière de défense biologique sur son territoire ou en un lieu quelconque placé sous sa juridiction ou sous son contrôle ? Les travaux relevant d'un tel programme porteraient notamment sur la prophylaxie, les études de pouvoir pathogène et de virulence, les techniques de diagnostic, l'aérobiologie, la détection, le traitement, la toxinologie, la protection physique, la décontamination et d'autres recherches apparentées.

Oui/Non

Dans l'affirmative, remplir la partie 2 ii) de la Formule A - description du programme.

Formule A : Partie 2 (ii)

Programme national de recherche-développement *en matière de défense biologique*

Description

1. Objectifs : Etude des mécanismes de pénétration intracellulaire de toxines d'origine biologique. Utilisation de méthodes biophysiques pour déterminer liens structure-fonction afin de définir des contremesures génériques.

   a) Etude interactions entre Ustilago m. toxin et membranes phospholipidiques
   b) Etude interactions porines (VDAC) et membranes phospholipidiques. Etude de la régulation du canal et de son insertion.
   c) Recherche de contremesures prophylactiques anti toxines (type Brefeldin A)

   Financement :
   JSM R&T
   Crédits extérieurs (EMBO, NFWO)

2. Montant affectés au programme pour 1999

JSM R&T	2 200 000 FB
Crédits extérieurs	N/A
Total	2 200 000 FB

3. Le programme est exécuté en milieu universitaire (cfr adresse du laboratoire).
   En dépit des subsides extérieurs, il n'y a aucun contrat commercial en cours avec une firme ou avec l'institution universitaire. Le Dr. ZIZI est détaché par MS au sein de la VUB.

4. cfr point n° 2
   L'entièreté des fonds est utilisée au niveau de l'institution sus-mentionnée.

5. Nihil

6. Hiérarchie
   - Prof. Dr. M. *Zizi*, coordinateur du programme de recherche
   - Un doctorant
   - Melle K. Vandenbroek, assistance technique

* Déclaration partie (iii) comme en annexe

Formule A - Partie 2 (ii)

Programme national de recherche-développement en matière de défense biologique

Description

1. Objectifs : Mise au point et évaluation de technique de diagnostic rapide des maladies infectieuses bactériennes:

   a) mise au point d'un système de détection spécifique des staphylocoques basé sur une mise en évidence par biologie moléculaire de gènes spécifiques d'espèce : gènes "femA-like"
   b) détection multiparamétrique des staphylocoques (staphylocoques dorés, staphylocoques coagulase-négative, staphylocoques multi-résistants) dans les liquides biologiques (liquide céphalo-rachidien, produit de lavage broncho-alvéolaire, liquide d'ascite, tissus et le sang de patients infectés)
   c) mise au point d'un test de détection spécifique au sein de la famille des Pseudomonas : discrimination entre Pseudomonas aeruginosa, Burkholderia cepacia et Stenotrophomonas maltophilia
   d) recherche de séquences spécifiques pour l'identification des pneumocoques et streptocoques
   e) recherche de séquences permettant de mettre au point une stratégie de diagnostic spécifique pour les mycobactéries.

Financement :
SSM R&T
Crédits extérieurs (via convention entre l'UCL et la région Wallonne)

2. Montant affectés au programme pour 1999 :

SSM R&T	2.100.000 FB
Crédits extérieurs	20.000.000 FB
Total	22.100.000 FB

3. Le programme est exécuté en milieu universitaire (cf adresse du laboratoire).
En dépit des subsides extérieurs, il n'y a, actuellement, aucun contrat commercial en cours ni avec l'institution universitaire, ni avec la Région Wallonne. L'infrastructure, une partie du matériel et les fonds de soutien sont octroyés à titre scientifique et destinés exclusivement au développement des projets, SANS contre-partie.
4. cf point 6/2.
L'entièreté des fonds est utilisée au niveau de l'institution sus-mentionnée.

5. Nihil.

6. Hiérarchie :
- Méd Maj Gala: coordinateur du programme de recherche
- Dr. Sc. P. Cannuffel : expertise scientifique et technique
- M. Bouyer : assistance technique
- 3 techniciennes A1 : assistance technique
- intervention ponctuelle des techniciens du laboratoire de biologie moléculaire

7. Déclaration partie (iii) jointe en annexe.

Formule A - Partie 2 ii)

Programme national de recherche-développement en matière de défense biologique

Description

1. Indiquer les objectifs et le financement du programme et résumer les principales activités de recherche-développement menées dans le cadre du programme, en particulier dans les secteurs suivants : prophylaxie, études de pouvoir pathogène et de virulence, techniques de diagnostic, aérobiologie, détection, traitement, toxinologie, protection physique, décontamination et autres recherches.

2. Indiquer le montant total des fonds affectés au programme et leurs sources.

3. Certains éléments de ce programme sont-ils exécutés sous contrat avec l'industrie, des institutions universitaires ou dans d'autres installations ne relevant pas de la défense ?

Oui/Non

4. Dans l'affirmative, quelle est la proportion du total des fonds affectés au programme dépensés dans ces installations, sous contrat ou autres ?

5. Indiquer succinctement les objectifs et les secteurs de recherche du programme exécutés sous contrat et dans d'autres installations au moyen des fonds indiqués au paragraphe 4.

6. Indiquer la structure (organisation) du programme et ses relations hiérarchiques (sans omettre les installations individuelles participant au programme).

7. Fournir une déclaration conformément à la partie 2 iii) de la Formule A pour chacune des installations, gouvernementales ou non, dont une partie importante des ressources sont consacrées au programme national de recherche-développement en matière de défense biologique, sises sur le territoire de l'Etat auteur de la déclaration ou en un lieu quelconque placé sous sa juridiction ou son contrôle.

Formule A - Partie 2 (ii)

Programme national de recherche-développement en matière de défense biologique

Installations

1. Nom de l'installation:
Laboratorium voor Fysiologie, Departement of Moleculaire Celbiologie (jusqu'à Nov 1999).

2. Emplacement de l'installation:
Katholieke Universiteit Leuven, Campus Gasthuisberg O/N, 49 Herestraat, 3000 Leuven.
(Jusqu'à Nov 1999)
Depuis Déc 1999: Unité FYSP, VUB, Faculteit Geneeskunde en Farmacie, Laarbeeklaan 103, 1090 Brussel.

3. Superficie des secteurs de laboratoire, par niveau de confinement:

BL2: 44 m carrés (appartenant au département)
BL3: non disponible
BL4: non disponible

Superficie totale des laboratoires: 40 m² (250 m² au sein de la VUB)

4. Organigramme de l'installation:

(i) Total des effectifs affectés au projet: 3

(ii) Répartition du personnel:
Militaire 1
Civil 2

(iii) Répartition du personnel par catégorie:
Scientifique 2
Technique 1

(iv) Liste des disciplines scientifiques représentées au sein du personnel scientifique et technique:

Dr Sciences: 0
MD-PhD: 1
Doctorant: 1
A1: 1

Formule A - Partie 2 (ii)

Programme national de recherche-développement en matière de défense biologique

Installations

1. Nom de l'installation :
Applied Molecular Technologies

2. Emplacement de l'installation
Université catholique de Louvain, Cliniques Universitaires Saint-Luc, Clos Chapelle-aux-Champs, 30, 1200 Bruxelles

3. Superficie des secteurs de laboratoire, par niveau de confinement:

BL2 : 45 m²
BL3 : non disponible
BL4 : non disponible

Superficie totale des laboratoires : 350 m²

4. Organigramme de l'installation

i) Total des effectifs affectés au projet	6
ii) Répartition du personnel	
Militaire	2
Civil	4
iii) Répartition du personnel par catégorie	
Scientifique	2
Technique	4

iv) Liste des disciplines scientifiques représentées au sein du personnel scientifique et technique

Dr Sciences : 1
Dr Médecine : 1
Techniciens A1 : 4

Formule A - Partie 2 iii)

Programme national de recherche-développement en matière de défense biologique

Installations

Remplir la formule pour chaque installation déclarée conformément au paragraphe 7 de la Formule A, partie 2 ii).

Dans le cas d'installations mixtes, fournir les renseignements ci-après uniquement pour la partie de l'installation consacrée à la recherche-développement en matière de défense.

1. Nom de l'installation :

2. Emplacement de l'installation (indiquer l'adresse et les coordonnées géographiques) :

3. Superficie des secteurs de laboratoire, par niveau de confinement :

BL2 .... (m^2)

BL3 .... (m^2)

BL4 .... (m^2)

Superficie totale des laboratoires .... (m^2)

4. Organigramme de chaque installation :

i) Total des effectifs ....

ii) Répartition du personnel
Militaire ....
Civil ....

iii) Répartition du personnel par catégorie :
Scientifiques ....
Ingénieurs ....
Techniciens ....
Personnel administratif et auxiliaire ....

iv) Liste des disciplines scientifiques représentées au sein du personnel scientifique et technique.

v) Y a-t-il des personnes employées sous contrat dans l'installation ? Dans l'affirmative, indiquer leur nombre approximatif.

v) Etudiant (1 personne civile) sur fonds exterieurs (Fondation van Buuren)
Technicienne A1 employée par MDN

vi) L'activite est partiellement financée par le Ministere de la Défense (fonctionnement + personnel A1).

vii) Developpement Demande de brevet commencée

viii) Rapports, abstracts, et publications

ABSTRACTS:

Exo- and endocytosis in relationship with vasopressin action on toad urinary bladder. Beauwens, R., Snauwaert, J., *Zizi,* M., Tauc, M., Bourguet, J. (1985) *Arch. Intern. Biochem. Physiol.*

Stimulation of chloride conductive pathways across amphibian skin epithelium by β-receptors agonist. *Zizi,* M., Ossemann, M., Beaujean, V., Crabbe, J. (1987) *Pflugers Archiv* **412**:S36

Recycling of aggrephores in toad urinary bladder. Beauwens, R., Bousset, M., *Zizi,* M., Beaufay, H., Abramov, M., Amar-Costeses, A. (1987) Furingen Switzerland.

Adenylate cyclase activation and chloride conductance of frog skin epithelium. *Zizi,* M., Ossemann, M., Granitzer, M., Beaujean, V., Crabbe, J. (1989) *Arch. Intern. Biochim. Physiol.* **97**:P70. (Belgian Physiol. Soc. Proceedings)

Regulation of ion conductance by isoproterenol in frog skin. Granitzer, M., Nagel, W., *Zizi,* M., Crabbe, J. (1989) **97**:C19 (Joint meeting ESCPB-AP)

Channel-like activity of Brefeldin A. *Zizi,* M., Fischer, R.S., Grillo, F.G. (1991) *Faseb Proceedings* **5**:abs#5913

Effects of lipid composition on Brefeldin A channels in planar lipid bilayers. *Zizi,* M., Fischer, R.S., Grillo, F.G. (1992) *Biophys. J.* **61**:A230 (Joint meeting Bioph Soc. & ASBMB)

Regulation of the outer mitochondrial membrane channel, VDAC. Colombini, M., *Zizi,* M. (1993) *Intracellular channels, Organelles and Cell function* International Symposium Proceedings, Trieste, Italy

NADH regulates the gating of VDAC, the outer membrane mitochondrial channel. *Zizi,* M., Forte, M., Blachly-Dyson, E., Colombini, M. Poster H101 selected for the *Hot Papers* section at the Cell Biology Meeting in Denver (1992)

NADH affects VDAC voltage-gating in planar phospholipid membranes. *Zizi,* M., Colombini, M. *Minisymposium* talk selected for the program at the Biophysical Society meeting In Washington, D.C. (1993)

- 1 Dr Sciences (1 personne civile) et techniciens A1 (3 personnes civiles) employes par l'UCL sur fonds extérieurs (Région Wallonne)
Technicienne A1 employee par MDN

(ii) L'activite est partiellement financée par le Ministère de la Defense (fonctionnement - personnel A1).

(iii) Developpement : Les travaux donnant lieu à une publication internationale mentionnent les personnes directement impliquees dans l'etude (Med Maj Gala, Dr Sc Vannuffel, M. Bouyer) ainsi que les contributeurs dont l'aide ou l'expertise ont ete requises pour l'aboutissement de l'etude. L'institution militaire et l'institution universitaire d'accueil sont mentionnees ainsi que l'origine des fonds de recherche (SM/R&T). De plus, le brevet PCT/BE98/00141 depose en septembre 1997 a ete publie en septembre 98. Il est depose en collaboration avec l'UCL (50% MDN-50% UCL).

(iv) Rapports, abstracts et publications

Abstracts: oral presentation

Specific detection of methicillin resistant staphylococci using multiplex PCR
P. VANNUFFEL, J. GIGI, G. WAUTERS, B. VANDERCAM, J.L. GALA
a) Belgian Society of Internal Medicine, Knokke Heist, October 22,1994, oral presentation
b) Belgian Society of Haematology, Genval, January 28, 1995, oral presentation
c) 35th Interscience Conference on Antimicrobial Agents and Chemotherapy, (ICAAC), San Francisco, CA (USA), September 1995

Rapid and specific identification of MRSA in endotracheal aspirates from mechanically ventilated patients.
VANNUFFEL, P., GIGI, J., LATERRE, P.F., REYNAERT, M., VANDERCAM, B., AND GALA, J.-L.
37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronro, Canada, Septembre 1997.

Molecular characterization of femA gene from Staphylococcus hominis and Staphylococcus saprophyticus, a useful marker for molecular typing of staphylococcal species.
VANNUFFEL, P., HEUSTERSPREUTE, M., PHILIPPE, M., AND GALA, J.-L.
37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronro, Canada, Septembre 1997.

Molecular typing of methicillin resistant staphylococci species by consensus PCR coupled to species-specific hybridization.
VANNUFFEL, P., HEUSTERSPREUTE, M., PHILIPPE, M., AND GALA, J.-L.
37th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Toronro, Canada, Septembre 1997.

P34 and P37 Based-multiplex PCR assay for discrimination between tuberculous and non-tuberculous mycobacteria.
VANNUFFEL, P., COETSIER, C., and GALA, J.-L.
38th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 1998, San Diego, California USA.

Can a protein catalyze its own insertion into a membrane? Thomas, L., Zizi, M., Colombini, M. (1993) *Intracellular channels, Organelles and Cell function* International Symposium. Proceedings. Trieste, Italy.

NADH regulates the permeability of the mitochondrial outer membrane by controlling the gating of VDAC channels. Lee, A.C., Zizi, M., Colombini, M. (1993) *Molec. Biol. Cell* **4**:A104 (Supplement). ASCB meeting, New-Orleans.

Autodirected insertion of a mitochondrial membrane protein in phospholipid membranes. Zizi, M., Thomas, L., Blachly-Dyson, E., Forte, M., Colombini, M. (1993) *Molec. Biol. Cell* **4**:A424 (Supplement). ASCB meeting, New-Orleans.

NADH controls mitochondrial respiration by regulating the outer membrane permeability to ADP. Lee, A., Zizi, M., Colombini, M. (1994) *Biophys. J.* **66**:A21.

Evidence for a functional sliding motion of a ß-strand during voltage-gating of the VDAC channel. Zizi, M. Blachly-Dyson, E., Forte, M., Colombini, M. (1994) *Biophys. J.* **66**:A135.

The voltage-gating of VDAC is sensitive to ion flow. Zizi, M., Byrd, C., Colombini, M. (1994) *Biophys. J.* **66**:A247.

The association of both subunits of *Ustilago maydis* killer toxin, KP6, forms large voltage-independent channels. Zizi, M., Finkler, A., Koltin, Y. (1995) *Biophys. J* **68**:A203.

Probing the epithelial Na^+ channel topology by the study of its combined interactions with Cu^{2+} and amiloride. Mesotten, D., De Smet, P., Van Driessche W., Zizi, M. (1995) Belgian Physiological Society meeting (published in *Pflugers Archiv*)

Capacitance measurements of solvent-free planar phospholipid membranes. Zizi, M., Raskin, G., Van Driessche, W. (1995) Belgian Physiological Society meeting (published in *Pflugers Archiv*)

Cell volume regulation during gradual and stepwise changes in osmolality. Van Driessche, W., De Smet, P., Zizi, M. (1996) FASEB- Experimental Biology Meeting.

Functional differences between reconstituted wheat voltage-dependent anion channel isoforms. Elkeles, A., Zizi, M., Breiman, A., (1996) *Frontiers in Mitochondrial Research*. International Symposium Proceedings (Albany, NY)

Molecular and functional characterization of wheat voltage-dependent anion channels (VDAC). Elkeles, A., Breiman, Zizi, M. (1996) *Frontiers in Mitochondrial Research*. International Symposium Proceedings (Albany, NY)

Elkeles, A., Breiman, A., Zizi, M. (1997) Functional differences in Yeast-expressed wheat VDAC isoforms. Biophysical Society Annual Meeting in New Orleans.

Godfraind, J.M., Zizi, M., Deconinck, N. (1997) Hippocampal LTP in dystrophin- and dystrophin isoforms-deficient mice. Neuroscience Society meeting, Wash. DC. *Neurosci.* **23(2)**:1874

Boxus, R., Zizi, M. (1998) Polyamine levels can regulate VDAC function. *Biophys J* **74**:AD6.

vi) Quelles sont la ou les sources de financement de l'activité réalisée dans l'installation ? Mentionner si l'activité est entièrement ou partiellement financée par le Ministère de la défense.

vii) Quels sont les montants des fonds alloués aux secteurs de programme ci-après :
Recherche ....
Développement ....
Essais et évaluation ....

viii) Décrire brièvement la politique adoptée en matière de publication dans l'installation :

ix) Fournir une liste des documents et rapports accessibles au public qui portent sur les travaux réalisés au cours des douze derniers mois (indiquer les auteurs, les titres et les références complètes).

5. Décrire succinctement les travaux sur la défense biologique réalisés dans l'installation, y compris le(s) type(s) de micro-organismes* et/ou toxines étudiés, et résumer les études en plein air sur les aérosols biologiques.

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* Notamment les virus et prions.

PUBLICATIONS: (in peer reviewed journals)

Increased chloride permeability of amphibian epithelia treated with aldosterone. Beauwens, R., Beaujean, V., Zizi, M., Rentmeesters, M., Crabbe, J. (1986) *Pflugers Archiv* **420**:620-624.

Formation of cation channels in planar lipid bilayers by Brefeldin A. Zizi, M., Fisher, R.S., Grillo, F.G. (1991) *J. Biol. Chem.* **266**:18443-18445.

NADH regulates the gating of VDAC, the mitochondrial outer membrane channel. Zizi, M., Blachly-Dyson, E., Forte, M., Colombini, M. (1994) *J. Biol. Chem.* **269**:1614-1616.

β-NADH decreases the permeability of the mitochondrial outer membrane to ADP by a factor of 6. Lee, A.C., Zizi, M., Colombini, M. (1994) *J. Biol. Chem.* **269**:30974-30980.

Oriented channel insertion reveals the motion of a transmembrane Beta strand during voltage gating of VDAC. Zizi, M., Thomas, L., Blachly-Dyson, E., Forte, M., Colombini, M. (1995) *J. Membrane Biol.* **144**:121-129.

Multiple cDNAs of wheat voltage-dependent anion channels (VDAC): isolation, differential expression, mapping and evolution. Elkeles, A., Devos, K.M., Graur, D., Zizi, M., Breiman, A. (1995) *Plant Mol. Biol.* **29**:109-124.

Functional differences in yeast-expressed wheat voltage-dependent anion channel isoforms (VDAC): Indication for the presence of a novel modulating protein. Elkeles, A., Breiman, A., Zizi, M. (1997) *J. Biol. Chem.* **272**:6252-6260.

Isovolumetric regulation of cell volume in a distal nephron cell line (A6). Van Driessche, W., De Smet, P., Li, J., Allen, S., Zizi, M., Mountian, I. (1997) *Am. J. Physiol.* **272**:C1890-C1898.

Adenine nucleotide binding on the inositol 1,4,5-triphosphate receptor bind caffeine but not adenophostin A or cADP-ribose. Maes, K., Missiaen, L., Parijs, J.B., Sienaert, I., Zizi, M., De Smedt, H., Casteels, R. (1999) accepted in *Biochem. J.*

VDAC is an ion flow-sensitive channel. (1998). Zizi, M., Byrd, C., Boxus, R., Colombini, M. accepted in *Biophysical J.*

Ustilago maydis Killer toxin (KP6) forms large voltage-independent channels in phospholipid membranes. Zizi, M., Finkler, A., Bruenn, J.A., Koltin, Y. - submitted to *J. Membrane Biol.*

Rapports

1. Rapport projet G96/02 mars 1996 JSM R&T
2. Rapport projet G96/02 mars 1997 JSM R&T
3. Rapport projet G96/02 mars 1998 JSM R&T

5. Agent etudie : N/A

Molecular identification of MRSA at admission in ICU : a cost-benefit analysis
GALA, J.L., VANDERCAM, B., and VANNUFFEL, P.
38th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 1998, San Diego, California, USA.

Combined discrimination between staphylococci species and identification of methicillin resistance by a sandwich enzyme-linked oligo sorbent assay.
VANNUFFEL, P., LOCKMAN, L., REMACLE, J., and GALA J.-L.
39th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 1999, San Francisco, California, USA.

Rapid and specific molecular discrimination between Pseudomonas aeruginosa, Burkholderia cepacia and Stenotrophomonas maltophilia.
VANNUFFEL, P., and GALA, J.-L.
39th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), 1999, San Francisco, California, USA.

Infections pathogènes sévères : place de la détection moléculaire rapide. GALA J.-L. (présentation orale). Symposium de médecine d'urgences et de soins intensifs, UCL, Bruxelles, 3 décembre 1999.

Publications :

Specific detection of methicillin-resistant staphylococci species using multiplex PCR.
P. VANNUFFEL, J. GIGI, H. EZZIDINE, B. VANDERCAM, M. DELMEE, G. WAUTERS, J.-L. GALA
(corresponding author : JL Gala)
Journal of Clinical Microbiology, 1995, 33, 2864-2867.

Specific detection of methicillin-resistant staphylococci species using multiplex PCR.
Letter to the Editor : Author's reply.
J.L. GALA
Journal of Clinical Microbiology, 1996, 34, 1599.

Infection in burn and trauma patients: current issues in antimicrobial propylaxis and therapy.
J.-L. GALA
International Review of the Armed Forces Medical Services, 1995,68,35-40.

Nosocomiale infecties of het brandwondencentrum van het Militair Hospitaal Koninging Astrid.
E. BUYDENS, JL GALA
Ann. Med. Mil. Belg. 1995, 9, 175-181.

Rapid and specific identification of MRSA *in* endotracheal aspirates from mechanically ventilated patients.
VANNUFFEL, P., GIGI, J., LATERRE, P.-F., REYNAERT, M., VANDERCAM, B., AND GALA, J.-L.
J. Clin. Microbiol., 1998, 36, 2366-2368.

Molecular characterization of femA gene from *Staphylococcus hominis* and *Staphylococcus saprophyticus*, a usefull marker for molecular typing of staphylococcal species.
VANNUFFEL, P., HEUSTERSREUTE, M., PHILIPPE, M., AND GALA, J.-L.
Research in Microbiology, 1999, 150 :129-141.

Orthopaedic prostheses and bacterial infection.
J.L. GALA. Ann. Med. Mil. Belg., 14 (2000), 53-62.

Molecular strategies for identification of infected prostheses.
P. VANNUFFEL, M. BOUYER, O. CORNU, M. MOREAU, O. WENANT, B. VANDERCAM, J.-L. GALA
Ann. Med. Mil. Belg. 14 (2000): 63-64

Desoxyribonucleic acid (DNA): cradle of life and ultimate cause of death.
J.L. GALA. Publié dans les proceedings de "Radiologie et les Prix Nobel. Le "rayonnement" de la découverte des rayons X sur les lauréats ultérieurs du prix Nobel", 10/3/2000.

A duplex PCR procedure for discrimination between tuberculous and non-tuberculous pathogenic mycobacteria.
CYELTSIER, C., VANNUFFEL, P., BLONDEEL, N., DENEF, J.-F., COCITO, C., AND GALA, J.L.
J. Clin. Microbiol., submitted after first revision.

Brevets

« Genetic sequences, diagnostic and/or quantification methods and devices for the identification of staphylococcal strains » : P. Vannuffel (UCL) and J.-L. Gala (MDN), PCT/BE98/00141 – WO9916780A

Rapports

1. Rapport projet G95/01 mars 1995 JSM R&T
2. Rapport projet G96/01 mars 1996 JSM R&T
3. Rapport projet G97/01 mars 1997 JSM R&T
4. Rapport projet G98/01 mars 1998 JSM R&T
5. Rapport projet G99/01 mars 2000 JSM R&T (en cours)

4. Agents étudiés : staphylocoques multi-résistants (Staphylococcus aureus, epidermidis, hominis, saprophyticus, haemolyticus, lugdunensis, sciuri, xylosus, shleiferi, capitis, warneri, cohnii, anaerobius, intermedius, gallinarum, caseolyticus), Pseudomonas (aeruginosa, cepacia et maltophilia), streptocoques sp., entérocoques sp., mycobactéries tuberculeuses et non-tuberculeuses.

7. MESURE DE CONFIANCE "F" :

- Déclaration d'activités antérieures dans le cadre de programmes de recherche-développement biologique de caractère offensif et/ou défensif

Afin d'améliorer la transparence et l'ouverture, les Etats parties déclarent s'ils ont procédé ou non à des programmes de recherche-développement biologique de caractère offensif et/ou défensif depuis le 1er janvier 1946.

Dans l'affirmative, les Etats parties fournissent des renseignements sur ces programmes, en utilisant la Formule F.

Formule F

Déclaration des activités menées dans le passé au titre de programmes de recherche-développement biologique de caractère offensif et/ou défensif

1. pas de Convention

Formule F

Déclaration des activités menées dans le passé au titre de programmes de recherche-développement biologique de caractère offensif et/ou défensif

1. Date de [illegible]

Formule F

- Déclaration des activités menées dans le passé au titre de programmes de recherche-développement biologique de caractère offensif et/ou défensif

1. Date d'entrée en vigueur de la Convention à l'égard de l'Etat partie.

2. Programmes de recherche-développement biologique de caractère offensif, qui ont été menés dans le passé :

   - OUI - NON
   - Période(s) durant laquelle (lesquelles) ces activités ont été menées
   - Résumé des activités de recherche-développement - indiquer si des travaux ont été faits en ce qui concerne la fabrication, l'essai et l'évaluation, l'utilisation en tant qu'arme et le stockage d'agents biologiques; résumé du programme de destruction d'agents et d'armes de ce type, et d'autres activités de recherche connexes.

3. Programmes antérieurs de recherche-développement biologique de caractère défensif :

   - OUI - NON
   - Période(s) durant laquelle (lesquelles) ces activités ont été menées
   - Résumé des activités de recherche-développement - indiquer si des travaux ont été faits ou non dans les domaines suivants : prophylaxie, études de pouvoir pathogène et de virulence, techniques de diagnostic, aérobiologie, détection, traitement, toxinologie, protection physique, décontamination et autres activités de recherche connexes; indiquer si possible l'endroit où ces activités se sont déroulées.

8. MESURE DE CONFIANCE "G" :

- Déclaration des installations de fabrication de vaccins

Afin d'accroître la transparence des activités de recherche-développement en biologie qui ont un rapport avec la Convention, et d'étendre les connaissances scientifiques et techniques au sens de l'article X, chaque Etat partie déclarera toutes les installations, tant gouvernementales que non gouvernementales, qui se trouvent sur son territoire ou sont placées sous sa juridiction ou son contrôle où que ce soit, et qui fabriquent sous licence de l'Etat partie des vaccins pour la protection de l'homme. Il utilisera la Formule G ci-jointe pour communiquer les données y relatives.

8. MESURE DE CONFIANCE "G" :

- Déclaration des installations de fabrication de vaccins

Afin d'accroître la transparence des activités de recherche-développement en biologie qui ont un rapport avec la Convention, et d'étendre les connaissances scientifiques et techniques au sens de l'article X, chaque Etat partie déclarera toutes les installations, tant gouvernementales que non gouvernementales, qui se trouvent sur son territoire ou sont placées sous sa juridiction ou son contrôle où que ce soit, et qui fabriquent sous licence de l'Etat partie des vaccins pour la protection de l'homme. Il utilisera la Formule G ci-jointe pour communiquer les données y relatives.

BULGARIA

23 May 2000

The Permanent Mission of the Republic of Bulgaria to the United Nations presents its compliments to the Department for Disarmament Affairs and has the honor to submit on behalf of the Bulgarian Government the annual Declaration form, dated 16 May 2000 in accordance with the decision of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE
A, part 1	☐	☐
A, part 2 (i)	☒	☐
A, part 2 (ii)	☒	☐
A, part 2 (iii)	☒	☐
B, part 2 (i)	☒	☐

B, part 2 (ii)	☒	☐
C	☐	☒
D	☐	☐
E	☐	☐
F	☒	☐
G	☐	☒

(Please match the appropriate box (es) for each measure with a tick.)

Date: 16 May 2000
State Party to the Convention: REPUBLIC OF BULGARIA

FORM A, PART 1

Exchange of data on research centers and laboratories

1. Name :	The Stephan Angeloff Institute of Microbiology to the Bulgarian Academy of Sciences Sections of "Pathogenic bacteria" and "Virology"
2. Responsible public or private organization and company:	Bulgarian Academy of Sciences
3. Location and Postal Address:	Block 26, "Acad.Georgy Bonchev" Sofia-1113,Bulgaria
4. Sources of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defense	Bulgarian Academy of Sciences
5. Number of maximum containment units	No units of P4 protection level
6. Highest level of protection	P2 is the highest level of protection
7. Scope and general description of activities:	Research on pathogenecity and virulence of pathogenic agents and pestis, mellodosis and Bacillus anthracis fever

Date: 16 May 2000

State Party to the Convention: REPUBLIC OF BULGARIA

FORM D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar fora for exchange:

For each such event, the following information should be provided:

Name of the conference, etc.:	First Balkan Conference of Microbiology
Arranging organization:	Balkan Society of Microbiology
Time:	October 5-9, 1999
Place:	Plovdiv
Main subject(s) for the conference:	Medical, General and Applied, Veterinary, Soil, Plant Microbiology, Virology, Parasitology, Infectious Immunology
Conditions of participation:	to be a microbiologist from the Balkan region

Date: 16 May 2000
State Party to the Convention: REPUBLIC OF BULGARIA

Point of contact for further information:

The Stephan Angeloff Institute of Microbiology to the Bulgarian Academy of Sciences
26 Acad. G.Bonchev, str., 1113 Sofia, Bulgaria
Prof. Angel Galabov, President of the Balkan Society of Microbiology

Date: 16 May 2000
State Party to the Convention: REPUBLIC OF BULGARIA

FORM E

Confidence Building Measure "E"

Declaration of Legislation, Regulations and Other Measures

RELATING TO	LEGISLATION	PROVISIONS
1. Development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery	Constitution of the Republic of Bulgaria - international treaties which have been ratified by the Parliament become an integral part of the domestic law of the Republic of Bulgaria.	→Art. 5 **paragraph** 4 stipulates that "Any international instruments which have been ratified through the constitutionally established procedure, promulgated and having come into force with respect to the Republic of Bulgaria, shall be considered part of the domestic legislation of the country. They shall supersede any domestic legislation stipulating otherwise."

Date: 16 May 2000

State Party to the Convention: REPUBLIC OF BULGARIA

Penal code	
- *Chapter XIV on war crimes and offences against humanity*	→Under art. 415, (paragraph 1) (as amended - SG, No. 62/1997) A person who, in violation of the rules of international law for waging war uses or orders nuclear or chemical weapons or impermissible ways or means for waging war to be used, shall be punished by deprivation of liberty for three to ten years. (paragraph 2). If particularly grave consequences have set in therefrom, the punishment shall be deprivation of liberty for ten years or life imprisonment."

Date: 16 May 2000
State Party to the Convention: REPUBLIC OF BULGARIA

- *Chapter XI Generally dangerous crimes* *Section III Crimes against the health of the nation*	→ By virtue of Art 354, (paragraph 1) a two-year imprisonment is provided for a person that without having due license acquires, holds, appropriates or gives to another highly active or poisonous substance, which is not a narcotic substance placed under permit regime
Section IV Other generally dangerous crimes	→ According to Art 356a " For preparation of crime under Art 354,.. provided the act perpetrated does not constitute a graver crime, the punishment shall be deprivation of liberty for up to 5 years..." According to Art 356b (1),(2) a penalty is provided for a foreign citizen, who is preparing on the territory of the Republic of Bulgaria to commit a crime abroad under Art 354., as well as are setting up an organization or group for the same purpose

Date: 16 May 2000
State Party to the Convention: REPUBLIC OF BULGARIA

State Party to the Convention: REPUBLIC OF BULGARIA

	List of dual-goods and technologies according to Chapter 1 , art.4/3 paragraph 2 of the Law on the control of foreign trade activity in arms and dual-use technologies and goods (Decree No 205 of the Council of Ministers of 4.09.1998, published in State Gazette No 108 of 15.09 1998) →to be updated on an annual basis	

Date: 16 May 2000
State Party to the Convention: REPUBLIC OF BULGARIA

CANADA

9 June 2000

Please find enclosed a submission of Canada's 1999 Annual Report of Confidence Building Measures, Biological and Toxin weapons Convention. This report is forwarded to you under the decision of the Third Review Conference held in September 1991, and reaffirmed at the Fourth Review Conference in December 1996, to implement additional Confidence Building Measures and to strengthen the Confidence Building Measures adopted in 1986 in the form of data declarations.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #1

1. **Name(s) of the research centre and/or laboratory**
Laboratory Centre for Disease Control
Bureau of Microbiology

2. **Responsible public or private organization or company**
Health Canada

3. **Location and postal address**
1015 Arlington Avenue,
Winnipeg, Manitoba
R3E 3R2

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**
Canadian Government - Health Canada

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m_2)**
1 unit (185 m^2)

6. **If no maximum containment unit, indicate highest level of protection**
Level 3 - 3 units (280m^2, 235m^2, and 230m^2)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
The laboratory is a national centre of expertise that provides diagnostic and research services on human diseases, including tuberculosis, brucellosis, anthrax, tularemia, zoonotic agents (e.g. hantavirus) and arboviruses.

Maximum containment unit is certified and operational, however work with Risk Group 4 agents will not be started until later this year.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #2

1. **Name(s) of the research centre and/or laboratory**
   Laboratory Centre for Disease Control
   Bureau of Microbiology

2. **Responsible public or private organization or company**
   Health Canada

3. **Location and postal address**
   Room 260, H.P.B. Bldg.
   Tunney's Pasture
   Ottawa, ON
   K1A 0L2

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**
   Canadian Government - Health Canada

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m_2)**
   none

6. **If no maximum containment unit, indicate highest level of protection**
   Level 3 - 1 unit (37.7m^2)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The laboratory is used for biosafety and biocontainment research activities and emergency response assistance for bioterrorism (ie. initial triage on suspect bioterrorism packages).

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #3

1. **Name(s) of the research centre and/or laboratory**
   Therapeutic Products Directorate
   Bureau of Biologics & Radiopharmaceuticals

2. **Responsible public or private organization or company**
   Health Canada

3. **Location and postal address**
   Rooms 2126 to 2142,
   L.C.D.C. Bldg.
   Tunney's Pasture
   Ottawa, ON
   K1A 0L2

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**
   Canadian Government - Health Canada

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m_2)**
   none

6. **If no maximum containment unit, indicate highest level of protection**
   Level 3 - 1 unit ($94m^2$)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The laboratory provides diagnostic services and biologics production for human diseases (e.g. prion diseases, C.J.D., Japanese Encephalitis Virus).

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #4

1. **Name(s) of the research centre and/or laboratory**
   Laboratory Centre for Disease Control
   Bureau of HIV/AIDS and STD

2. **Responsible public or private organization or company**
   Health Canada

3. **Location and postal address**
   Room 3122 to 3150
   3rd Floor, L.C.D.C. Bldg
   Tunney's Pasture
   Ottawa, ON
   K1A 0L2

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**
   Canadian Government - Health Canada

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m_2)**
   None

6. **If no maximum containment unit, indicate highest level of protection**
   Level 3 - 1 unit (162m^2)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The laboratory is a national centre of expertise that provides diagnostic and research services on HIV/AIDS

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #5

1. **Name(s) of the research centre and/or laboratory**
   Health of Animals and Food Laboratory

2. **Responsible public or private organization or company**
   Canadian Food Inspection Agency, Laboratories Directorate

3. **Location and postal address**
   3400 Casavant Boulevard West
   Saint-Hyacinthe, Quebec
   J2S 8E3

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   Canadian Government - Canadian Food Inspection Agency

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2)**

6. **If no maximum containment unit, indicate highest level of protection**
   Level: 4 units (cell culture unit not included).
   a) Biohazard - Bacteriology 4.25 modules net surface of 88.25m^2
   b) Biohazard - Virology 5.75 modules net surface of 106.85m^2
   c) Laboratory animals 2.5 modules includes clean and dirty corridors 46.45m^2
   d) Large animals (swine) 25.25 modules includes clean and dirty corridors 469.15m^2

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The laboratory provides diagnostic services in support of the National Animal Health and Agri-Food Safety Programs. This site is the centre of expertise for indigenous porcine diseases. It also housed the Health Canada HACCP pre-harvest team (gate).

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #6

1. **Name(s) of the research centre and/or laboratory**
   National Centre for Foreign Animal Disease

2. **Responsible public or private organization or company**
   Canadian Food Inspection Agency, Laboratories Directorate

3. **Location and postal address**
   1015 Arlington Street
   Winnipeg, Manitoba
   R3E 3M4

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   Canadian Government - Canadian Food Inspection Agency

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2)**
   2 units (65m^2) and (35m^2)

6. **If no maximum containment unit, indicate highest level of protection**
   Level 3 - 2 units (1050m^2) and (1090m^2)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The Institute is a national centre of expertise for Foreign Animal Disease that provides diagnostic and research services on selected livestock and poultry diseases that are foreign to Canada. The centre became operational in April 1998.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #7

1. **Name(s) of the research centre and/or laboratories**
   Animal Diseases Research Institute, Lethbridge

2. **Responsible public or private organization or company**
   Canadian Food Inspection Agency, Laboratories Directorate

3. **Location and postal address**
   P.O. Box 640
   Lethbridge, Alberta
   T1J 3Z4

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   Canadian Government - Canada Food Inspection Agency and National Defence

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)**

6. **If no maximum containment unit, indicate highest level of protection**
   Level 3 - 800m^2

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The Institute provides veterinary diagnostic services and conducts technology development to support the National Animal Health and Agri-Food Safety Programs. This site is the centre of expertise for Bovine/Equine Indigenous Viral Diseases, Leptospirosis, Anthrax, and Anaplasmosis, and diseases of non-traditional livestock. In addition, it provides diagnostic services in rabies and brucellosis.

The Institute provides veterinary diagnostic services and conducts technology development to support the National Animal Health and Agri-Food Safety Programs. This site is the centre of expertise for Bovine/Equine Indigenous Viral Diseases, Leptospirosis, Anthrax, and Anaplasmosis and diseases of non-traditional livestock.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #8

1. **Name(s) of the research centre and/or laboratories**
   Animal Diseases Research Institute, Nepean

2. **Responsible public or private organization or company**
   Canadian Food Inspection Agency, Laboratories Directorate

3. **Location and postal address**
   3851 Fallowfield Road
   P.O. Box 11300
   Station "H"
   Nepean, Ontario
   K2H 8P9

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   Canadian Government - Canadian Food Inspection Agency

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2)**

6. ***If no maximum containment unit*, indicate highest level of protection**
   Level 3 - 2 units ($450m^2$) and ($550m^2$)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The Institute is a national centre of expertise in avian diseases, brucellosis, germplasm, mycobacteria, and rabies.

   It also produces biological reagents used by other laboratories of the Directorate as well as Agriculture and Agri-Food Canada's field staff. A program for the evaluation of veterinary biologics is also carried out.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #9

1. **Name(s) of the research centre and/or laboratories**
   National Centre for Foreign Animal Disease

2. **Responsible public or private organization or company**
   Canadian Food Inspection Agency, Laboratories Directorate

3. **Location and Postal address**
   1015 Arlington Avenue
   Winnipeg, Manitoba
   R3E 3M4

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   Canadian Government - Canadian Food Inspection Agency

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2)**
   Level 3 - 2 units (385m^2) and (158m

6. **If no maximum containment unit, indicate highest level of protection**
   2 units (65m^2) and (35m^2)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The Institute is a national centre of expertise for Foreign Animal Disease that provides diagnostic and research services on selected livestock and poultry diseases that are foreign to Canada. The centre became operational in April 1998.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #10

1. **Name(s) of the research centre and/or laboratories**
   Centre for Animal and Plant Health

2. **Responsible public or private organization or company**
   Canadian Food Inspection Agency, Laboratories Directorate

3. **Location and Postal address**
   93 Mount Edward Road
   Charlottetown, P.E.I.
   C1A 5T1

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   Canadian Government - Canadian Food Inspection Agency

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2)**

6. **If no maximum containment unit, indicate highest level of protection**
   Level 3 - 2 units (385m^2) and (158m^2) total

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   This site is a centre of expertise for retrovirology and is responsible for diagnostic services, accreditation of private laboratories, and technology development and transfer.

MESURES DE CONFIANCE A (Partie I)

Échange de données sur les centres et laboratoires de recherche - n° 11

1. **Nom du centre ou du laboratoire de recherche**
   Laboratoire de santé publique du Québec

2. **Organisation ou société responsable, secteur privé ou public**
   Institut National de Santé Publique du Québec

3. **Endroit et adresse postale**
   20045 Chemin Ste-Marie
   Ste-Anne de Bellevue, Qué.
   H9X 3R5

4. **Source(s) de financement de l'activité déclarée. Indiquer également si l'activité est financée au complet ou en partie par le ministère de la Défense.**
   100% Ministère de la Santé et des Services Sociaux du Québec

5. **Nombre d'unités d'isolement maximal au centre ou au laboratoire de recherche. Veuillez indiquer la taille de chacune (m^2).**
   1 unité composée de 8 cubicules totalisant 150 mètres carrés

6. **Si le centre ou le laboratoire ne possède pas d'unité d'isolement maximal, quel est le degré le plus élevé de protection ?**

7. **Description générale et portée des activités, y compris le genre de micro-organisme ou de toxine, s'il y a lieu.**
   Les microorganismes énumrés ci-dessous ont été isolés au LSPQ et sont conservées à des fins de référence sous forme d'exemplaires congelés à -70 °C en zone de confinement 3
   ou en azote liquide (phase vapeur).

   Bactéries:
   Bacillus anthracis, Brucella spp.,Burkholderia pseudomallei, Clostridium botulinum, Francisella tularensis et *Yersinia pestis*.

   Champignon:
   Coccidioides immitis

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #12

1. **Name(s) of the research centre and/or laboratories**
   BC Centre for Disease Control

2. **Responsible public or private organization or company**
   Public Health Organization

3. **Location and Postal address**
   655 West 12th Ave
   Vancouver, BC
   V5Z 4R4

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of National Defence**
   -

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2)**
   3 CL3 labs:
   1. Tuberculosis Lab (988 sq. ft.)
   2. Research Lab (660 sq. ft.)
   3. Special Pathogens Lab (1190 sq. ft.)

   Note: The CL3 labs are not operational yet. Target Date: December 2000

6. **If no maximum containment unit, indicate highest level of protection**
   -

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   The CL3 labs will be used for diagnostic and research purposes only.
   Organisms: M. tuberculosis, Brucella, Yersinia pestis, Francisella tularensis, Bacillus anthracis, Hantavirus, CJD, HIV. At the moment the use of each CL3 lab is unknown except for the TB lab.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #13

1. **Name(s) of the research centre and/or laboratory**
Newfoundland Public Health Laboratory

2. **Responsible public or private organization or company**
Public
A division of the Department of Health and Community Services,
Government of Newfoundland

3. **Location and postal address**
The Leonard A. Miller Centre
100 Forest Road
P.O. Box 8800
St. John's, NF
A1B 3T2

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**
Fully financed by the Department of Health & Community Services.

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m_2)**
NONE.

6. **If no maximum containment unit, indicate highest level of protection**
One Level III containment facility.

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
Routine and specialized diagnostic and research activities dealing with level II and level III microorganisms. Level III containment facility is almost exclusively used for all laboratory work dealing with Mycobacterium tuberculosis.

CONFIDENCE BUILDING MEASURE A (PART I)

Exchange of Data on Research Centres and Laboratories - #14

1. **Name(s) of the research centre and/or laboratory**
   Institute for Biological Sciences

2. **Responsible public or private organization or company**
   National Research Council Canada

3. **Location and postal address**
   100 Sussex Drive and Building M54
   Montreal Road
   Ottawa, ON
   K1A OR6

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**
   Treasury Board

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m_2)**
   None

6. **If no maximum containment unit, indicate highest level of protection**
   Building M-54: A 1000 sq. ft. small animal biocontainment level 3 suite
   Sussex Drive: a 750 sq ft. large scale level 2 fermentation facility (expected to be upgraded to CL3 standards during the next 12 months)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**
   Building M54. The small animal CL3 facility exists primarily to develop rodent (predominantly mouse) models of infection with selected vegetative risk group 2 and risk group 3 bacteria. These models are used to study fundamental aspects of bacterial pathogenicity and host defence, and to determine the efficacy of putative vaccines and antimicrobial agents.

   With the aforementioned considerations in mind, the CL3 animal suite will be used to:
   1) store primary stocks of RG2 and RG3 bacteria.
   2) prepare small (up to 200 ml) inocula of RG3 bacteria
   3) expose mice to small particle aerosols of RG2 and RG3 bacteria. The CL3 facility is equipped with an aerosol generator and nose-only exposure apparatus for this purpose.
   4) expose mice to RG3 bacteria via the enteral route (by gavage), or parenterally (intravenous, intraperitoneal, intradermal, subcutaneous routes)

5) recover RG3 bacteria from the tissues of experimantally-infected animals
6) sterilize by disinfection and autoclaving, rodent carcasses and all other contaminated materials generated by the aforementioned activities. Following in-house sterilization all waste is packaged in sealed drums and incinerated off-site.

To date only RG2 bacteria have been handled in the small animal containment facility. However, work with mycobacterium tuberculosis and human virulent strains of Francisella tularensis are expected to commence within the next year.

Pathogen fementation facility Sussex Drive: This facility is equipped with a 28L and 75L fermenter. Its primary purpose is to provide biomass for subsequent antigen extraction, purification, characterization, and utilization (e.g. as diagnostic agents or experimental vaccines). As a matter of routine, all pathogen growths are killed *in situ* in the fermenter vessels prior to harvest by addition of phenol to 5 %. Subsequently, biomass is harvested using continuous centrifuges housed in custom built biosafety cabinents. The ensuing cell pastes are confirmed to be sterile by plating on appropriate agar media prior to being released from the laboratory. In the past 2 years, approximately 20 genera of human, animal, and zoonotic bacterial pathogens have been grown in bulk quantities. Examples include *E. coli* O157:H7, *Haemophilus influenzae*, *Neisseria meningitidis*, and *Vibrio cholerae*. All of the biomass is directly utilized in-house by other IBS staff or their collaborators.

CONFIDENCE BUILDING MEASURE A (PART II)

National Biological Defence Research and Development Program

I. Declaration

1. **Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction and control anywhere?**

Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

For Canada, YES

CONFIDENCE BUILDING MEASURE A (PART II)

National Biological Defence Research and Development Program

II. Description

1. The objective of the Canadian Biological Defence Program at DRES is to insure that the Canadian Forces are provided with an adequate defence against biological warfare agents. No offensive studies of any kind are permitted by the Government of Canada. The Program is wholly funded by the Department of National Defence Canada on behalf of the Government. The principal research and development areas are the following:
   a. assessment of the hazards that may be faced by the Canadian Forces from biological agents and toxins;
   b. detection of biological agents and toxins using immunological, biochemical and physical detection methods;
   c. medical countermeasures against the infections or intoxications from biological agents and toxins;
   d. decontamination of biological agents and toxins; and
   e. studies on the mode of action and toxicity of toxins and the mode of action and infectivity of biological agents.

2. In Canada, the biological and chemical defence programs are combined and it is not possible to separate the funds from the two programs without a detailed analysis of every purchase. In 1999/2000 the amount spent on the Canadian biological and chemical defence program, excluding salaries, was **$5.244** M. It is estimated that approximately one third of this was spent on biological defence. The source of this funding was the Government of Canada.

3. Yes

4. See answer to question 2. above. About 65% was spent on contracts with industry and universities.

5. Contractors are used to support all of the various aspects of the program listed in paragraph 1 above.

6. In the Department of National Defence, the research and development program in biological defence is the responsibility of the Defence Research and Development Branch (DRDB). Research and some development is carried out at the Defence Research Establishment Suffield (DRES) and through contractors. The bulk of the development program is carried out from DRDB Headquarters. An organizational chart of that part of DRES responsible for biological defence is attached; only those personnel working on Biological Defence are included.

CONFIDENCE BUILDING MEASURE A (PART II)

National Biological Defence Research and Development Program

II. Facilities

1. Defence Research Establishment Suffield
Medical Countermeasures Section, Hazard Avoidance Section

2. The facility is located in Buildings 1, 10 and 67 of Canadian Forces Base Suffield near the village of Ralston, Alberta, Canada. The postal address is:

Director General
Defence Research Establishment Suffield
Box 4000
Medicine Hat, Alberta
T1A 8K6

3. Floor area of laboratory areas in Building 1 by containment level:
BL2 - 417 m^2
BL3 - 159 m^2
BL4 - 0 m^2

The total laboratory floor area in Building 1 used for biological defence work is 868 m^2. An Aerosol Test Facility containing 38 m^2 of lab space is located next to Building 1. Building 67 provides general laboratory space (no containment) and the area is 304 m^2. Building 10 is a vivarium and includes general laboratory space. The area of the vivarium is 1134 m^2.

4. The organizational structure of the facility is:

i. total number of personnel 27

ii. division of personnel
military 0
civilian 27

iii. division of personnel by category
scientists 12
engineers 0
technicians 12
admin. and support staff 3

iv. The following is a list of scientific staff disciplines:

Bacteriology
Immunology

Microbiology
Virology
Chemistry
Biochemistry
Biotechnology
Veterinary Medicine
Medicine
Pharmacology

v. There are seven contractor staff working in biological defence at this facility. They are working to develop medical countermeasures to, and detection of, BW agents and toxins. A list of contractors carrying out R&D in biological defence is attached.

vi. The research in this facility is 100% funded by the Department of National Defence (Canada) and under contract to, or through collaborative agreements, with other government departments and industry.

vii. Funding level estimates

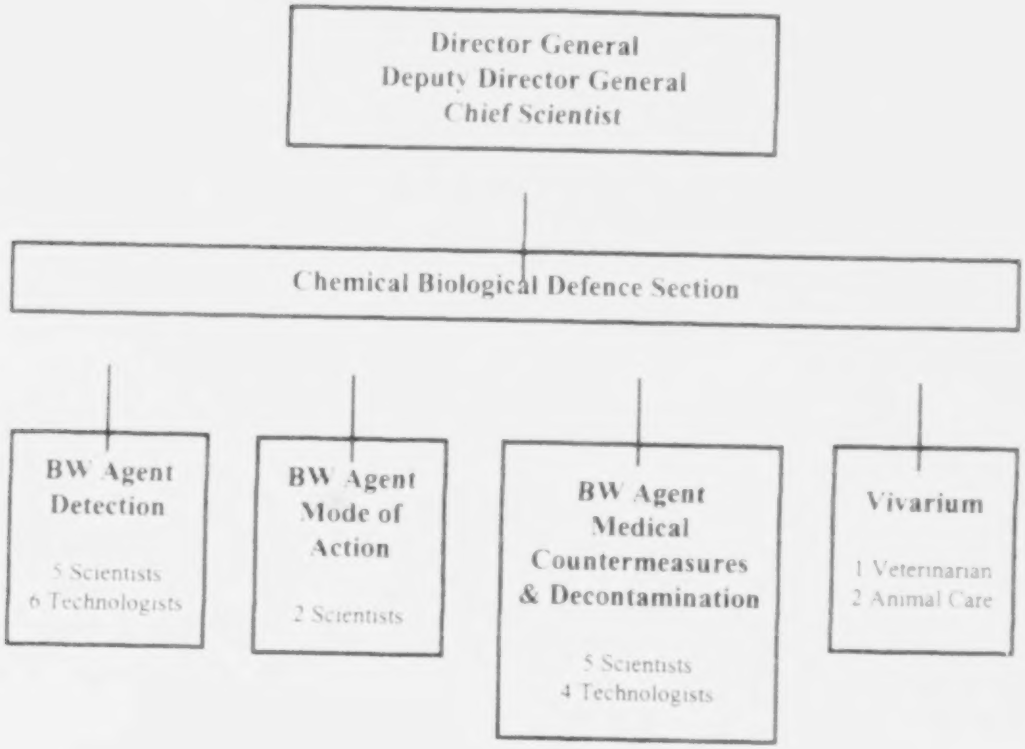
Research	**$3.504** M
Development	**$1.74** M
Test and Evaluation	$ NIL

viii. All staff are encouraged to publish the results of their research in the open literature whenever not precluded by security considerations. There is also an internal publication system which may be used for publications. Generally security considerations only require classification of information that reveals a deficiency in the defensive posture of the Canadian Forces.

ix. See attached list of publications.

5. The biological defence program at DRES is outlined in Form A, part 2, (ii), paragraph 1 and additional details follow. Assessment of the hazards from biological agents and toxins involves research to understand the dispersion of such agents and is carried out by mathematical modelling techniques. Part of the work in detection involves R&D leading to the production of field portable chemical/biological agent detection systems. In medical countermeasures, research is carried out on new drugs and vaccines and delivery systems, for example microencapsulated antibiotics and vaccines. Microorganisms other than NDV and BG which have been used in the biological defence program are Bacillus anthracis, Brucella species (abortus, melitensis, neotomae, ovis and suis), Burkholderia species (mallei, pseudomallei) F. tularensis, Yersinia *enterocolitica*, Yersinia pestis, various influenza virus strains, Western Equine encephalitis, Eastern Equine Encephalitis, Venezuelan Equine Encephalitis and Chikungunya. Toxins used include botulinum toxin, staphylococcal enterotoxin B and various venoms from marine organisms, reptiles and insects. Outdoor studies have involved only NDV and BG.

Defence


Director General
Deputy Director General
Chief Scientist
Chemical Biological Defence Section
BW Agent Detection
5 Scientists
6 Technologists
BW Agent Mode of Action
2 Scientists
BW Agent Medical Countermeasures & Decontamination
5 Scientists
4 Technologists
Vivarium
1 Veterinarian
2 Animal Care

CONFIDENCE BUILDING MEASURE A (PART II)

List of Contractors
Carrying Out Research and Development
in Biological Defence
for the Department of National Defence of Canada

CONTRACTOR	TITLE
Veterinary Infectious Diseases Organization, University of Saskatchewan, Saskatoon, SK	Development of a mucosal vaccine vector of Y. Pestis
Canada West Bioscience, Calgary, AB	Biological based assay for the screening of neutralizing antibodies to toxins
Inex Phar., Vancouver, BC	Formulation development and GMP preparation of liposomal poly (ICLC)
Canada West Bioscience, Calgary, AB	Passive immunization for equine encephalitis
Kinchyle Enterprises, Medicine Hat, AB	Medical Countermeasures against SEB
CFIA, Lethbridge, AB	Expression systems for antibodies antibody fragments and nucleic acid immunization to viral agents
C. Bateman, Victoria, BC	Analysis of 3 Safety Issues
University of Alberta , Edmonton, AB	Development of aerosol inhalation as therapeutic approaches for DNA immunization and oligonucleotide therapy against respiratory disease
University of Calgary, Calgary, AB	Structure based design of a botulinum toxin inhibitor
College of Vet. Med. Inf. Diseases and Physiology, Stillwater, OK, USA	Cytokine expression in response to Brucella vaccines
Canada West Biosciences, Calgary, AB	Production of functional human Fab libraries to potential BW Agents
Alvi Researchers, Medicine Hat, AB	Re-engineering of single chain variable fragments antibody
Computing Devices Canada, Calgary, AB	CB Detector, Advanced development model

University of Alberta, Edmonton, AB	Development of a mini-flow cytometer for biological detection
University of Alberta, Edmonton, AB	Microchip based capillary electrophoresis for chemical and biochemical analysis
Canada West Biosciences, Calgary, AB	Construction of genetically engineered antibodies for use in microchip based capillary electrophoresis
Canada West Biosciences, Calgary, AB	Development of a CPT assay for a microfluidics enabled platform
Alberta Microelectronic Center, Edmonton, AB	Micromatching of glass plates for chemical and biochemical analysis
Dycor Industrial Research, Edmonton, AB	Engineering, design and construction of Microchip based capillary electrophoresis for chemical and biochemical analysis
University of Alberta, Edmonton, AB	Development of capillary electrophoresis-laser induced fluoresence biomarker fingerprinting for identification of biological organisms
Spectral Diagnostics, Toronto, ON	Development of antibody based hand-held test kits
University of Alberta, Edmonton, AB	Development of a high sensitivity CE fluoresence based immunosensor for toxin detection
Coulter Electronics of Canada, Burlington, ON	Modification of a coulter flow cytometer and preliminary analysis of bacterial fluoresence at novel excitation wavelengths
Dycor Industrial Research, Edmonton, AB	Implementation of a new alarming algorithm capabilities to DRES biological detection system
University of Alberta, Edmonton, AB	Capillary electrophoresis fractionation, enzyme chemistry and mass spectrometry for sensitive detection and identification of peptides and proteins
Infectio Diagnostics Ltd., Sainte-Foy, PQ	Development of a chemical fluorescent based PCR assay for Bacillu anthracis

CONFIDENCE BUILDING MEASURE B

Exchange of Information on Outbreaks of Infectious Diseases

Background information of nationally notifiable diseases

NUMBER OF CASES PER YEAR

DISEASE	1992	1993	1994	1995	1996	1997	1998	1999**
Aids	1330	1206	1156	1266	919	443	452	Unk
Amoebiasis	1618	1782	1723	1625	1673	1806	1586	1040
Botulism	9	3	3	16	14	19	7	4
Brucellosis	15	13	8	7	3	13	7	9
Campylobacteriosis	12392	13437	15723	13686	12803	13547	14236	9849
Chancroid	2	0	1	1	2	1	0	0
Chickenpox	17788	50836	40582	41855	20848	29597	32483	7119
Chlamydial Infection	46365	44022	41235	37398	34405	34147	39355	33398
Cholera	5	7	2	5	3	0	3	0
Diphteria	2	2	1	2	0	1	0	1
Giardiasis	7486	7063	6523	6295	6059	5677	5519	4242
Gonococcal Infections	9253	6832	6167	5715	5027	4522	5060	4036
Gonococcal Ophtalmia neonatorum	4	14	5	15	17	2	5	1
H. Influenzae B (invasive)	280	117	57	52	55	64	46	35
Hepatitis A	2689	1825	1712	2062	2605	1904	1090	762
Hepatitis B	2814	2762	3079	3005	2361	1043	970	1189
Hepatitis C	319	1629	2856	14232	16028	19572	21885	15721
Hepatitis nonA-nonB	2	3	2	0	2	5	0	0
Hepatitis other & unspecified viral	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Legionellosis	102	83	69	70	91	84	104	48
Leprosy	16	13	10	10	8	7	3	2
Listeriosis	39	56	47	54	33	52	75	39
Malaria	407	485	430	638	1003	1029	368	287
Measles	2432	203	523	2361	335	584	16	37

Pneumococcal meningitis	55	71	59	78	43	64	138	80
Other bacterial meningitis	218	144	24	143	145	222	80	63
Viral meningitis	368	402	698	341	451	427	887	290
Meningococcal infections	443	385	330	299	255	252	155	173
Mumps	319	332	369	402	313	264	117	77
Paratyphoid	12	26	18	23	22	21	27	19
Pertussis	3608	7401	10151	9818	5408	4439	8797	5359
Plague	0	0	0	0	0	0	0	0
Poliomyelitis	1	0	0	1	0	0	0	0
Rabies	0	0	0	0	0	0	0	0
Rubella	2265	1028	217	300	302	4007	68	26
Congenital Rubella	1	–	4	2	1	1	1	1
Salmonellosis	6969	6977	6453	6400	6587	6015	7040	4741
Shigellosis	1986	1943	1429	1217	1086	1509	1593	973
Syphilis, early symptomatic	256	119	140	112	81	76	95	41
Syphilis, Congenital	4	4	3	2	1	3	6	2
Syphilis, Early Latent	106	63	41	33	42	40	70	6
Other Syphilis	808	686	485	441	675	592	554	268
Tetanus	4	7	3	6	3	7	2	1
Trichinosis	30	9	0	9	3	21	61	41
Tuberculosis	2049	2039	2075	1930	1849	1972	850*	662
Typhoid	101	93	80	79	41	70	82	36
Verotoxigenic E coli infection	1672	1173	1183	1494	1247	1273	1484	1420
Yellow Fever	0	0	0	0	0	0	0	0

ALL FINAL NUMBERS

* Tuberculosis numbers are still preliminary for 1998
** All 1999 numbers are preliminary

Source: Division of Disease Surveillance
Laboratory Centre for Disease Control

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge:

Department of National Defence

Health Canada

The Institute for Biological Sciences

BC Centre for Disease Control

Newfoundland Public Health Laboratory

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge

1999
[illegible] Publications

Department of National Defence
[illegible] Research

[illegible]

[illegible] Smith, M.R. [illegible]

[illegible] 1999.

[illegible] High temperature induced [illegible] 1999.

[illegible] and [illegible], R. A Novel [illegible] Vol 18, No. 9, December 1999, pp. [illegible]

[illegible] and Bassett, K. [illegible] detection using [illegible]

[illegible] formation and characterization of [illegible] 18:115-123.

TECHNICAL REPORTS AND MEMORANDA

[illegible] High temperature induced changes in Pseudomonas [illegible] 1999.

[illegible] Clewley, R.W. [illegible] Agents. An Introduction for [illegible] pages.

[illegible] Laser Induced Fluorescence [illegible] Technical Memorandum TM [illegible], August 2000, [illegible] pages.

Fulton, R.E., Stadnyk, L., Spence, M., Ho, J. and Houle, C. Electrochemiluminescence and Immunochromatographic Analysis of Samples Collected by the Canadian Integrated Biochemical Agent Detection System at Joint Field Trials IV. DRES Report 1999-066, June 1999. 40 pages.

Ho, J., Ogston, J. and Spence, M., Technologies for Estimating Viable Spores in an Aerosol Particle, Technical Report 1999-136, 1999, Unclassified.

Lee, W.E., Thompson, H.G., Analysis of Bacillus Globigii Spores Using the BioDetector (U), DRES Technical Memorandum 99-154, Defence Research Establishment Suffield, 1999, UNCLASSIFIED, 19 pages.

Nagata, L.P., Cherwonogrodzky, J.W., Schmaltz, F., Kournikakis, B., Knodel, M., Bader, D.E., Spence, M. and Harding, R.K. Standard Operating Procedures (SOPs) for the Level 3 Biocontainment Facilities at the Defence Research Establishment Suffield (DRES), Second Edition. Suffield Special Publication 194, 1999.

Simard, J.R., Pierre Mathieu, P., Theriault, J-M., Larochelle, V., Roy, G., McFee, J. and Ho, J. Active Range-Gated Spectrometric Standoff Detection and Characterization of Bioaerosols: Preliminary Analysis, DREV-TM-1999-056, 1999.

PRESENTATIONS

Alvi, A.Z., Stadnyk, L.L., Nagata, L.P., Fulton, R.E., Bader, D.E. and Suresh, M.R. Development of monoclonal functional single chain variable fragment (ScFv) antibodies against Venezuelan equine encephalitis virus (VEE). 49th Annual Meeting, Canadian Society of Microbiologists. Abstract GM1, Montreal, PQ, DRES PM 1999-156, 13-16 June 1999.

Alvi, A.Z., Fulton, R.E., Nagata, L.P. and Suresh, M.R. Cloning, expression and functional analysis of single chain antibodies against Venezuelan equine encephalitis virus. Invited Speaker Seminar (Dr James Coulton), Department of Microbiology and Immunology, McGill University, Montreal, PQ, 17 June 1999.

Armour, S.J., Yee, E., Brooks, OCT K., and Kournikakis, B. A BW Terrorist Attack on a Major Canadian City, DRES PM99-088, presented at NATO Challenge Subgroup, Kjeller, Norway, 22-24 June 1999, UNCLASSIFIED. 23 Slides.

Armour, S.J., Yee, E., Brooks, OCT K., and Kournikakis, B. A BW Terrorist Attack on a Major Canadian City, DRES PM99-086, presented Swedish Defence Establishment, Umea, Sweden, 28 June 1999, UNCLASSIFIED. 23 Slides.

Attiya, S., Jemere, A.B., Lee, W.E. and Harrison, D.J., Automated Microchip Platform for Immunoassay Analysis, Poster presentation at DARPA Principal Investigators Meeting, July 29-30, 1999, Pittsburgh, PA.

Bhatti, A.R., Roehl, D.W.G. and Chaudhry, G.R. Temperature sensitive macromolecular changes in Pseudomonas aeruginosa. Proc. Amer. Soc. Microbiol. I-56, p383. 1999.

Chaudhry, G.R., Roehl, D.W.G., Vue, Y. and Bhatti, A.R. Functional analysis of a small plasmid in a carbamate-degrading Pseudomonas sp. 50432. Proc. Amer. Soc. Microbiol. Q-386, p 608.

1999

Harding, R.K., Alternatives to Vaccines, CB 2000, Washington, DC. Unclassified, 15 December 1999.

Harding, R.K. and Lundy, P.M. Chemical Agent Injury and the Medical Management of Casualties. Special Operations Medical Associaton (SOMA) Annual Meeting, Tampa, Florida. Unclassified. 8 December 1999, 52 slides.

Harding, R.K., Responses to CB Terrorism, Operational Medicine Conference, OP Med 99, Quebec, PQ. Unclassified, 3 November 1999, 46 slides.

Harrison, D.J., Skinner, C., Cheng, S.B., Ocvirk, G., Attiya, S., Bings, N., Wang, C., Li, J., Thibault, P. and Lee, W.E., From Micro-Motors to Micro-Fluidics: The Blossoming of Micromachining Technologies in Chemistry, Biochemistry and Biology, Transducers '99 Vol 1, 10th International Conference on Solid State Sensors, published by Institute of Electrical Engineers of Japan, 1999, pp 12-15.

Harrison, D.J., Skinner, C., Cheng, S.B., Ocvirk, G., Attiya, S., Bings, N., Wang, C., Li, J., Thibault, P., Smith, R. and Lee, W.E., The Blossoming of Micro-Fluidics: Micromachining Technologies in Chemistry, Biochemistry and Biology, National Research Council of Canada Workshop on Biochip Technologies, NRC-Ottawa, September 10-11, 1999.

Hartshorne, H., Ning, Y., Lee, W.E. and Backhouse, C.J., Microfabricated Ferrofluidic Valves and Pumps, National Research Council of Canada Workshop on Biochip Technologies, NRC-Ottawa, September 10-11, 1999.

Hartshorne, H., Ning, Y., Lee, W.E. and Backhouse, C.J., Microfabricated Pumps and Valves, DARPA Principal Investigators Meeting, July 29-30, 1999, Pittsburgh.

Ho, J., Technological Advances in Biological Aerosol Detection using FLAPS, Lincoln Laboratories, MIT Invitation Lecture Series, 8 October 1999, Lexington, MA.

Jemere, A.B., Attiya, S., Cheng, S.B., Skinner, C., Chiem, N., Paulson, M., Burchett, G., Ning, Y., Bader, D.E., Lee, W.E. and Harrison, J.D., Automated Microfluidic Bio-Analyses on Glass Chips, Biochip Workshop National Research Council, September 1999.

Lee, W.E., Attiya, S., Jemere, A.B., Paulson, M., Ning, Y. and Harrison, D.J., Automated Chemical Processing on Glass Chips, Biochip Workshop, National Research Council of Canada, Ottawa, September 9-10, 1999.

Lee, W.E. and Harrison, D.J., Microfluidics Enabled Automated Microchip Analysis Platform, DARPA Principal Investigators Meeting, July 29-30, 1999, Pittsburgh, PA.

Simard, J.R., Pierre Mathieu, P., Theriault, J-M., Larochelle, V., Roy, G., McFee, J. and Ho, J., Active Range-Gated Spectrometric Standoff Detection and Characterization of Bioaerosols, Proceeding of SPIE: Laser Radar Technology and Application IV, Aerospace/Defense Sensing, Simulation and Controls, Vol 3707, 5-9 April 1999, Orlando, USA, pp 116-128.

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge

1999
List of Publications

Health Canada

5. Bureau of Biologics [illegible]
None to report for 1999

6. Bureau of HIV/AIDS
None to report for 1999

7. Bureau of Microbiology

Busico KM, Marshall K, Ksiazek TG, [illegible] (1999). Prevalence of IgG antibodies to [illegible] Democratic Republic of the Congo [illegible]

Feldmann H (1999). Hantaviruses [illegible]

Feldmann H, Kiley MP (1999). [illegible] Curr Top Microbiol Immunol 235: [illegible]

Feldmann H, Klenk HD (1999). Marburg [illegible] Reference List.

Feldmann H, & Slenczka W (1999) [illegible] Gesellschaft fr Virologie (DVV) [illegible] 152

Feldmann H, Volchkov VE, [illegible] and future needs. Nova Acta Leopoldina [illegible]

Feldmann H, Volchkov VE, Volchkova VA, Klenk HD [illegible] Ebola virus and their potential role in [illegible]

Fine A, Layton M, Miller J, Cimini D, Lopez M, [illegible] Poshni I, Stirling H, McNamara [illegible] Terrillon G, Smith B, Prasad R, [illegible] K, Gallo R, Wong S, [illegible] Andreadis T, Blumenstein [illegible] Bruder K, Kent R, Essau R, Huppe [illegible] J, Artsob H, Smith J, Parker M, [illegible] Morbidity Mortality Weekly Report 48 [illegible]

Heiske A, Anheier B, Pilaski J, Klenk HD, Grone HJ, Feldmann H (1999) Polymerase chain reaction detection of Puumala virus RNA in formaldehyde-fixed biopsy material. Kidney Int. 55: 2062-2069.

Heiske A, Anheier B, Pilaski J, Volchkov VE, Feldmann H (1999) A new Clethrionomys-derived hantavirus from germany: evidence for distinct genetic sublineages of Puumala viruses in Western Europe. Virus Res 61: 101-112.

Johnson W, Artsob H, Ashton F (1999) Programs in Health Canada's Canadian Science Centre for Human and Animal Health Laboratory. Can J Infect Dis 10:325-328.

Klenk HD, Slenczka W, Feldmann H (1999) Marburg and Ebola viruses (filoviridae). In Encyclopedia of Virology (2nd ed.) (Granoff A, Webster RG, eds.) Academic Press, London: 939-945.

Klenk HD, Volchkov, VE, Volchkova VA, Feldmann H (1999). The polymorphism of the Ebola virus glycoprotein and its potential role in pathogenesis. Nova Acta Leopoldina NF 78, Nr 307: 141-149.

Lindsay L, Artsob H, Galloway T, Horsman G (1999) Vector of Lyme borreliosis, Ixodes scapularis identified in Saskatchewan. Canada Communicable Diseases Report 25:81-83.

Lindsay LR, Mathison SW, Barker IK, McEwen SA, Gillespie TJ, Surgeoner GA (1999) Microclimate and habitat in relation to Ixodes scapularis (Acari: Ixodidae) populations on Long Point,Ontario,Canada. J Med Entomol 36:255-262.

Lindsay LR, Mathison SW, Barker IW, McEwen SA, Surgeoner GA (1999) Abundance of Ixodes scapularis (Acari:Ixodidae) larvae and nymphs in relation to host density and habitat on Long Point,Ontario. J Med Entomol 36:243-254.

Monroe MC, Morzunov SP, Johnson AM, Bowen MD, Artsob H, Yates T, Peters CJ, Rollin PE, Ksiazek TG, Nichol ST (1999) Genetic diversity and distribution of Peromyscus-borne hantaviruses in North America. Emerging Infectious Diseases 5:75-86.

Rowe AK, Bertolli J, Khan AS, Mukunu R, Muyembe-Tamfum JJ, Bressler D, Williams AJ, Peters CJ, Rodriguez L, Feldmann H, Nichol ST, Rollin PE, Ksiazek TG, for the Commission de Lutte contre les Epidemies a Kikwit (1999). Clinical, virologic, and immunologic follow-up of convalescent Ebola hemorrhagic fever patients and their household contacts, Kikwit, Democratic Republic of the Congo. J Infect Dis 179: 28-35.
Schnittler HJ, Feldmann H (1999) Molecular pathogenesis of filovirus infections - Role of macrophages and endothelial cells. Curr Top Microbiol Immunol 236: 175-202.

Tomori O, Bertolli J, Rollin PE, Fleerackers Y, Guimard Y, DeRoo A, Feldmann H, Burt F, Swanepoel R, Killian S, Khan AS, Tshioko K, Bwaka M, Ndambe R, Peters CJ, Ksiazek TG (1999). Serological survey among hospital and health center workers during the Ebola hemorrhagic fever outbreak in Kikwit, Democratic Republic of the Congo. J Infect Dis 179: 98-101.

Verity R, Prasad E, Grimsrud K, Artsob H, Drebot M, Miedzinski L, Preiksaitis J. Hantavirus pulmonary syndrome in Northern Alberta: clinical and laboratory findings in 19 cases. Clinical Infectious Diseases (in press).

Volchkov VE, Volchkova VA, Chepurnov AA, Blinov VM, Dolnik O, Netesov SV, Feldmann H (1999). Characterization of the L gene and 5' trailer region of Ebola virus. J Gen Virol 80: 355-362.

Warshawsky B, Lindsay LR, Artsob H. Leptospira infection in trappers from Ontario, Canada. Can J Infect Dis (in press).

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge:

1999
List of Publications

The Institute for Biological Sciences

Open Literature, Reports, Journals, Publication of Results, etc.

The Institute for Biological Sciences is a mainstream research facility. Except in situations of commercial confidentiality, all work performed at IBS using pathogenic microbes is openly published in the scientific literature.

Example publications for 1999:

Conlan, J.W., [illegible] KuoLee, A. Webb, and M.B. Perry. 1999. *Salmonella landau* as a live vaccine against *Escherichia coli* O157:H7 investigated in a mouse model of intestinal colonization. Can. J. Microbiol. 45: 723-731.

Conlan, J.W., R. KuoLee, A. Webb, and M.B. Perry. 1999. Immunosuppression by a corticosteroid fails to exacerbate *Helicobacter pylori* infection in a mouse model of gastric colonization. Can. J. Microbiol. 45: 975-980.

Conlan, J.W. 1999. Early host pathogen interactions in the liver and spleen during systemic murine listeriosis: an overview. Immunobiology. 201: 178-187.

Logan, S.M., J.W. Conlan, M. Monteiro, W.W. Wakarchuk, and E. Altman. 2000. Functional genomics of *Helicobacter pylori*: identification of a B-1,4 galactosyltransferase and generation of mutants with altered LPS. Molecular Microbiology. In the press.

Conlan, J.W., R. KuoLee, A. Webb, A.D. Cox, and M.B. Perry. 2000. Oral immunization of mice with a glycoconjugate vaccine containing the O157 antigen of *Escherichia coli* O157:H7 admixed with cholera toxin fails to elicit protection against subsequent colonization by the pathogen. Can. J. Microbiol. In the press.

Conlan, J.W., R. KuoLee, A. Webb, and M.B. Perry. Mice are refractory to infection by small particle aerosols of the porcine respiratory pathogen, *Actinobacillus pleuropneumoniae*. Submitted for publication.

Conlan, J.W., S.L. Bardy, R. KuoLee, A. Webb, and M.B. Perry. Ability of Escherichia coli O157:H7 isolates to colonize the intestinal tract of conventional adult CD1 mice is transient. Submitted for publication.

Vinogradov, E.V., J.W. Conlan, and M.B. Perry. Serological cross-reaction between the lipopolysaccharide O-polysaccharide antigens of *Escherichia coli* O157:H7 and strains of *Citrobacter freundii* and *Citrobacter sedlakii*. Submitted for publication.

Yethon, J. A., D. E. Heinrichs, M. A. Monteiro, M. B. Perry, C. Whitfield. (1999) Involvement of waaY, waaQ, and waaP in the modification of *Escherichia coli* lipopolysaccharide and their role in the formation of a stable outer membrane. J. Biol. Chem. 273: 26310-26317.

Aussel, L., H. Therisod, D. Karibian, M. B. Perry, M. Bruneteau and M. Caroff. (2000) Novel variation of lipid A structures in strains of different Yersina species. FEBS. Lett. 465: 87-92.

Feldman M. F., C. L. Marolda, M. A. Monteiro, M. B. Perry, A. J. Parodi, and M. A. Valvano. (1999) The acivity of a putative polyisoprenol-linked sugar translocase (Wzx) involved in *Escherichia coli* antigen assembly is independent of the chemical structure of the repeat. J. Biol. Chem. 274: 35129-35138.

Perry, M. B. and L. L. MacLean (1999) Structural characterization of the antigenic O-chain of the lipopolysaccharide of *Escherichia coli* serotype O65. Carbohydr. Res. 322: 57-58.

Appelmelk, B., M. A. Monteiro, C. A. Clayton, A. A.Zheng, Verrboom, T., J. Maaskant, D. H. Eignden, C. H.Hokke,,and M. B. Perry. (1999). Phase variation in *Helicobacter pylori* lipopolysaccharides due to changes in the lengths of Poly(C) tracts in -Fucosyltransferase,genes. Infect. Immun. 67: 5361-5368.

Monteiro, M. A. B. J. Applemelk, D. A. Rasco, A. P. Moran, S. O. Haynes, L. L. MacLean, K. H. Khan, K. H. Michael, S. M. Logan, J. O'Rourke, A. Lee, D. E. Taylor, and M. B. Perry. (2000) Lipopolysaccharide structures of *Helicobacter pylori* genomic strains 26695 and J99, mouse model *H. pylori* Sydney strain, *H. pylori*UA915 expressing Lewis B Classification of *H. pylori* lipopolysaccharides in glycotype families. Eur. J. Biochem. 267: 305-320.

Amor, P. E., J. Yethon, M. A. Monteiro, and C. Whitfield. (1999) Assembly of the K40 antigen in E. coli: Identification of a novel enzyme respopnsible for the addition of L-serine residues to the glycan backbone and its requirements for K40 polymerization. J. Bacteriol. 181: 772-780.

Walsh, A. G. M. J. Matewish, L. L. Burrows, M. A. Monteiro, M. B. Perry and J. S. Lam (2000). Lipopolysaccharide core phosphates are required for viability and intrinsic drug resistance in *Pseudomonas aeruginosa*. *Molecular Microbiol.* 35: 768-780.

Monteiro, M. A., L. L. MacLean, K. H. Chan, Z. Pan, S. Yokota, K. Amano, D. E. Berg and M. B. Perry (2000) Production of Histo-blood Group antigens in lipopolysaccharides of *Helicobacter pylori* isolated from Chinese and Japanese hosts. (2000). Glycobiology. Vol 10 (March issue).

Perry, M. B. and L. L. MacLean. (2000) Structural identification of the lipopolysaccharide O-antigen producted by *Yersinia enterocolitica* serotype O:28.
Eur. J. Biochem. (in press).

Perry, M. B., L. L. MacLean, and M. Wilson. (2000). Structure of the lipopolysaccharide O-antigen of an *Actinobacillus actinomycetemcomitans* serogroup b subgroup and the relationship to pathogenecity of *A. actinomycetemcomitans* colony forms. Eur. J. Biochem. (In press).

Rahim, R., L. L. Burrows, M. A. Monteiro, M. B. Perry, and J. S. Lam. (2000) Molecular characterization of the biosynthesis of L-rhamnose and its incorporation into the lipopolysaccharide of *Pseudomonas aeruginosa*. J. Biol Chem. (submitted Jan 2000).

Rasko, D. A., G. Wang, M. A. Monteiro, M. M. Palic and D. E. Taylor.(2000). Synthesis of mono and di-fucosylated Type 1 Lewis blood group antigens by *Helicobacter pylori*. J. Biol. Chem. (Submitted)

Edwards, N., M. A Monteiro and N. High. (2000) Identification of *Helicobacter pylori* galE and rfbM genes and characterization of lipopolysaccharide mutants. Molecular Microbiol. 35 (in press).

Monteiro, M. A., F. St Michael, D. Slavic, J. I. MacInnes and M. B. Perry. (2000) The first description of a 1,6-β-D-glucan polymer in prokaryotes: 1,6-β-D-glucan is a common component of *Actinobacillus suis* and is the basis for a serotyping system for A. suis. Carbohydr. Res. (submitted)

Whitfield, C., D. E. Heinrichs, J. A. Yethon, K. L. Amor, M. A. Monteiro and M. B. Perry. Assembly of the R1 type Core Oligosaccharide of *Escherichia coli* lipopolysaccharide. J. Endotoxin Res. 5: 345-355

Slavic, D., T. L. Toffner, M. A. Monteiro, M. B. Perry and J. I. MacInnes. (2000). Prevalence of O1/K1 and O2/K3 reactive *Actinobacillus suis* isolates from health and diseased swine. Eur. J. Biochem (submitted)

Presentations

IBS scientists present their research using pathogenic microbes at the major international scientific conferences. Examples include:

Conlan, J.W. 1999. Early host:pathogen interactions in the liver and spleen during systemic murine listeriosis: an overview. March. Berlin, Germany

Monteiro, M.A. Invited lecturer at the 3rd International Iberian Carbohydrate Meeting. The production of a carbohydrate based vaccine to combat *Helicobacter pylori* infection.
1999 Monteiro, M. A. Invited speaker at the University of Alberta. The prevalent expression of histo-blood groups by H*elicobacterpylori* lipopolysaccharides.

1999 Monteiro, M. A. Invited speaker at the Universite de Parid-Sud Orsay. Lewis histo-blood group antigens of *Helicobacterpylori* lipopolysaccharides and the classification of Glycotypes.

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge:

1999
List of Publications

BC Centre for Disease Control

Please refer to the BCCDC Annual Report. A list for publications from 1999 is unavailable at the moment. Web site: www.bccdc.org

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge:

1999
List of Publications

Newfoundland Public Health Laboratory

Open Literature, Reports, Journals, Publication of Results, etc.

Ratnam, S., J. Stratton, C. O'Keefe, A. Roberts, R. Coats, M. Yetman, R. Khakhria, J. Hockin. 1999. Salmonella enteritidis outbreak due to contaminated cheese - Newfoundland. CCDR 25:1-4.

Bautista-Lopez, N., B.J. Ward, E. Mills, D. McCormick, N. Martel and S. Ratnam. 1999. Development and durability of measles antigen-specific lymphoproliferative response after MMR vaccination. Vaccine 1835:1-9.

Mossong, J., D.J. Nokes, W.J. Edmunds, M.J. Cox, S. Ratnam and C.P. Muller. 1999. Modeling the impact of subclinical measles transmission in vaccinated populations with waning immunity. Am J Epidemiol 150:1238-1249.

Ismaili, A., J.B. Meddings, S. Ratnam and P.M. Sherman. 1999. Modulation of host cell membrane fluidity: a novel mechanism for preventing bacterial adhesion. Am J Physiol 277:G201-G208.

Ratnam, S., G. Tipples, C. Head, M. Fauvel, M. Fearon and B.J. Ward. 1999. Performance of measles IgM enzyme immunoassays. 67th Conjoint meeting on Infectious Diseases. Edmonton. October-November 1999.

Ratnam, S., P. Ghatage, E. Franco and A. Ferenczy. 1999. HPV testing in combination with cytology in primary screening for cervical cancer and precursors. International Human Papillomavirus Conference. Charleston, SC. USA. Jan. 1999.

MacIntosh R., S. Ratnam, P. Ghatage, E. Franco and A. Ferenczy. 1999. Correlation of cytopathological diagnoses of cervical smears with Human Papillomavirus testing. United States and Canadian Academy of Pathology, 88th Annual meeting. San Francisco. March 1999.

Ratnam, S., G. Tipples, C. Head, M. Fauvel, M. Fearon and B.J. Ward. 1999. Performance of indirect IgM serology tests and IgM capture assays for laboratory diagnosis of measles. Abstr. PAHO TAC meeting. Ottawa. April 1999.

Ratnam, S., M. Grant, C.P. Archibald, J. Y. Lor, M.L. Montpetit, T. Gleeson, C. Scherf, and D. 1999 Sutherland HIV Strain Surveillance in Newfoundland: Pilot Laboratory Phase of The Canadian HIV Strain Surveillance Program (CHSSP). Abstr. Annual meeting, Canadian Association of HIV Research. British Columbia. May 1999.

Ratnam, S. 1999. Seroprevalence data for VZV in children and adults. National Varicella Consensus Conference. Montreal. May 1999.

Hatchette T. R.C. Hudson, W.F. Schlech, N.A. Campbell, J.E. Hatchette, S. Ratnam, C. Donovan, and T.J. Marrie. 1999. Caprine associated Q-fever; A new disease in Newfoundland. Annual meeting Infect. Dis. Soc. Amer. Abstr. Washington. September 1999.

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts: Planned international conferences, symposia, seminars, and other similar fora for exchange for Year 2000

Name of the conference, etc.
Challenge 2000

Arranging organization(s), etc.
International Association of Medical Laboratory Technologists

Time
June 18-23, 2000

Place
Vancouver, BC

Main subject(s) for the conferences, etc.
Clinical Microbiology

Conditions for participation
Open

Point of contact for further information, registration, etc.
Challenge 2000
#101-10001 West Broadway
Dept 144
Vancouver, BC
V6H 4E4
250-923-1937
c2000@csmls.org

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts: Planned international conferences, symposia, seminars, and other similar fora for exchange for Year 2000

Name of the conference etc.
Biohazard Containment: Working Safely in Level 3

Arranging organization(s), etc.
Office of Biosafety, Health Canada

Time
Nov. 6-9, 2000

Place
Ottawa, Ontario

Main subject(s) for the conference, etc.
Biosafety, Containment Facilities

Conditions for participation
Open

Point of contact for further information, registration, etc.
Office of Biosafety, Health Canada
Tunney's Pasture
Ottawa, On
K1A 0L2

Phone: (613) 957-1779

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts: Planned international conferences, symposia, seminars, and other similar fora for exchange for Year 2000

Name of the conference etc.
Conjoint Meeting on Infectious Diseases

Arranging organization(s), etc.
Canadian Association for Clinical Microbiology and Infectious Diseases

Time
November 4-9, 2000

Place
Ottawa, ON

Main subject(s) for the conference, etc.
Clinical Microbiology

Conditions for participation
Open

Point of contact for further information, registration, etc.
Dr. D. Groves
Dept. Microbiology
St. Joseph's Hospital
50 Charlton Ave. E
Hamilton, On
groves@fhs.csu.McMaster.ca

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts: Planned international conferences, symposia, seminars, and other similar fora for exchange for Year 2000

Name of the conference, etc.
Partnering for Optimal Care in Science

Arranging organization(s), etc.
Canadian Association for Laboratory Animal Science

Time
June 25-28, 2000

Place
Ottawa

Main subject(s) for the conferences, etc.
N/A

Conditions for participation
Open

Point of contact for further information, registration, etc.
Bob Madziak
CALAS National Office
P.O. Box 34122 RPO
Fort Richmond
Winnipeg, MB
R3T 5T5

Phone: (204) 261-7534

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts: Planned international conferences, symposia, seminars, and other similar fora for exchange for Year 2000

Name of the conference, etc.
Canadian Society of Microbiologists (CSM) 50th Annual Meeting

Arranging organization(s), etc.
Canadian Society of Microbiologists

Time
June 11-14, 2000

Place
University of Winnipeg
Winnipeg, MB

Main subject(s) for the conferences, etc.
All aspects of Microbiology

Conditions for participation
Open

Point of contact for further information, registration, etc.
Dr. Mario Jacques
CSM Meeting Secretary
Faculté de médecine vétérinaire
Université de Montréal
3200 rue Sicotte, C.P. 5000
St-Hyacinthe, QC
J2S 7C6

Phone: (450) 773-8521 (ext. 8348)
Fax: (450) 778-8108

CONFIDENCE BUILDING MEASURE E

Declaration of Legislation, Regulation and Other Measures

Relation to	Legislation	Regulation	Other Measures	Amended Since Last Year
a) Development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I.	YES*[1]	YES	YES	NO
b) Exports of microorganisms* and toxins.	YES	YES	YES	NO
c) Imports of microorganisms* and toxins.	YES	YES	YES	NO

* Microorganisms pathogenic to man, animals and plants in accordance with the Convention.

*[1] Such distinctions do not appear in existing Canadian legislation. However, some aspects would be captured by legislation, depending on circumstances. Canadian legislation is under review.

CONFIDENCE BUILDING MEASURE F

Declaration of Past Activities in Offensive and/or Defensive Biological Research and Development Programs

5. Date of Entry into Force - 26 March 1975 (Deposit 18 September 1972)

6. Past offensive biological R&D programs:
   - i Yes
   - ii 1 Jan 46 to 31 Dec 56
   - iii In the above period offensive work undertaken by Canada included: studies of improved procedures for production of certain toxins (eg. botulinum and diphtheria), studies on the use of insect s as vectors for pathogenic bacteria, test and evaluation of munitions, including performance in cold weather, studies of weapon-produced aerosols of potential BW agents, fundamental work related to field trials, dealing with the dispersion and properties of solid particulates, preparation of finely divided solids for munitions charging and sampling of toxic particulates, development of tissue culture processes for large scale cultivation of viruses; and development of M. mallei and M.I pseudomallei as new potential BW agents. There was no large scale production, stockpiling or weaponization of BW agents, and no work was aimed at determining the suitability of specific agents as weapons. When necessary, BW agents are destroyed by autoclaving.

7. Past defensive biological R&D programs:
   - i Yes
   - ii 1 Jan 46 to present
   - iii A key factor in biological defence work is that it is only through a thorough understanding of the properties and behaviour of potential BW agents that the potential threat can be appreciated, and work on suitable defensive measures can be undertaken. Accordingly, in the past there was much basic research on such agents, as well as studies of their characteristics and behaviour as aerosols. The aerosol work included studies to delineate the factors, such as those responsible for the death of airborne bacteria and viruses, that affect long distance travel o aerosols. The aim was to better understand the feasibility of large scale use of BW agents. Medical work in biological defence has covered research and development, and in some cases production of toxoids, antitoxins and vaccines for various potential BW agents including botulinum toxin, riderpest virus, Newcastle Disease virus, M. mallei, F. tularensis and diphtheria toxin. More recent work in biological defence is summarized in Form A, part 2.

CONFIDENCE BUILDING MEASURE G

Declaration of Vaccine Production Facilities

1. Name of Facility:
Institute for Biological Sciences,
National Research Council Canada

2. Location (mailing address):
100 Sussex Drive and Building M54,
Montreal Road,
Ottawa, ON
K1A OR6

3. General Description of the Types of Diseases Covered:
Pathogen fermentation facility: Experimental vaccine candidates are prepared from biomass generated in this facility. However, they are solely for pre-clinical evaluation in laboratory animals.

CONFIDENCE BUILDING MEASURE G

Declaration of Vaccine Production Facilities

1. Name of Facility:
Pasteur Merieux Connaught

2. Location (mailing address):
1755 Steeles Avenue West
North York, ON
M2R 3T4

3. General Description of the Types of Diseases Covered:

Pediatric Vaccines

Manufactured at North York site (Canada)	Manufactured by Foreign Affiliate and Distributed in Canada from this site
Pentacel - cPDT IPV Hib combination	Act-HIB (PRP-T) Hib conjugate vaccine
Quadracel - cPDT IPV combination	ProHIBit - Hib vaccine
DT IPV	Tripacel - cPDT combination
DT*	Actacel cPDT-PRPT
IPV	
OPV*	
DPT*	
ProHIBit DPT - DPT Hib*	
ProHIBiT5 - DPT IPV Hib*	
ProHIBiT DT - DT Hib*	
BCG vaccine	
Measles vaccine	

Adult Vaccines

Manufactured at North York site (Canada)	Manufactured by Foreign Affiliate and Distributed in Canada from this site
Td Adsorbed	Vaxigrip Influenza Vaccine
Td Polio Adsorbed	Fluzone Influenza Vaccine
Tetanus Toxoid	Pneumo 23 Pneumococcal Vaccine

Diphtheria Toxoid for reactors	Rabbies Immune Globulin
Rabies Vaccine	Diphtheria Antitoxin
Botulism A, B, E	Botulism E

Travel Vaccines:

Manufactured at North York site (Canada)	Manufactured by Foreign Affiliate and Distributed in Canada from this site
Adacel - Tdac P. Combination	Typhim Vi – Typhoid Polysaccharide
	Menomume - Meningoccoccal polysaccharide
	JE-VAX - Japanese Encephalitis Vaccine
	Yellow Fever Vaccine

Diagnostics and Therapeutics:

Manufactured at North York site (Canada)	Manufactured by Foreign Affiliate and Distributed in Canada from this site
ImmuCyst BCG 81 live Cancer therapeutic	Mulitest CMI - anergy testing
Tubersol - Mantoux tests	Mumps Skin Test Antigen

* Manufactured at the North York Site but not distributed in Canada.

CONFIDENCE BUILDING MEASURE G

Declaration of Vaccine Production Facilities

1. Name of Facility:
BioChem Vaccines Inc.

2. Location (mailing address):
2323, boul. du Parc Technologique
Sainte-Foy (Quebec)
G1P 4R8

3. General Description of the Types of Diseases Covered:

List of Products manufactured and distributed:
- Adsorbed d$_2$T5 toxoids against diphtheria and tetanus
- Adsorbed tetanus toxoids against tetanus
- BCG vaccine against tuberculosis
- Therapeutic against bladder cancer (BCG)
- Influenza vaccines (split and whole virion) against flu

List of products distributed:
None

CHINA

9 May 2000

The Permanent Mission of the People' s Republic of China to the United Nations presents its compliments to the Department for Disarmament Affairs of the United Nations and has the honor to transmit to the Department the information and date of Chinese Government relating to the implementation of the recommendations in accordance with the Final Declaration on Exchange of Confidence Building Measures of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological(Biological) and Toxin Weapons and Their Destruction in 1999.

中华人民共和国申报

根据 1991 年 9 月 9 日到 27 日在日内瓦召开的《禁止发展、生产和储存细菌（生物）与毒素武器和销毁此种武器的公约》缔约国第三次审查会议最后宣言关于交换七项信任措施的要求，中华人民共和国将 1999 年的情况申报如下：

1．资料交换中使用的“无资料申报”或“无新资料申报”的申报表格

措　施	无资料申报	无新资料申报
A 第 1 部分	☒	□
A 第 2 部分（一）	□	☒
A 第 2 部分（二）	□	☒
A 第 2 部分（三）	□	□
B（一）	□	□
B（二）	☒	□
C	□	☒
D	□	□
E	□	☒
F	□	☒
G	□	☒

日期：2000 年 3 月 4 日
公约缔约国：中华人民共和国

信任措施："A" 第二部分
交流关于本国生物战防御研究与发展方案的资料

（三）部分：设施

1、名称：微生物流行病研究所

Institute of Microbiology and Epidemiology

2、位置：中国北京丰台东大街 20 号 100071

3、实验室面积（平方米）：

生一2	388
生一3	132
生一4	0
总面积	4820

4、组织结构：

（一）人员总数：	162 人
（二）人员划分	
军　职	10 人
文　职	152 人
（三）人员类别划分	
科学家	63 人
工程师	[illegible] 人
技术人员	81 人
行政与后勤人员	16 人

（四）科学、工程人员学科一览表

医学、微生物学、流行病学、空气微生物学、生物化学、分子生物学、免疫学、病毒学、昆虫学、动物学、药学、药理学及毒理学、药[illegible]学、有机化学等

（五）有、无合同人员

无

（六）年经费：　550 万元人民

（七）下列领域的经费比例：

研　究	70%
发　展	30%
测试和评估	0%

（八）设施中研究成果均公开发表

（九）本设施 1999 年公开发表的论文及报告清单如下：

题　名：应用噬菌体随机肽库研究丙型肝炎病毒核心蛋白 B 细胞抗原表位
作　者：杜勇；王海涛；
出　处：中华微生物学和免疫学杂志 1999V19N1 4-8

题　名：两株双价痢疾菌苗免疫小鼠后 GALT 中 CD4^{+}+、CD8^{+}+T 细胞亚群的反应
作　者：石学甫；高杰英；彭红；邢丽；刘育红；陈志华；曾关富；
出　处：中华微生物学和免疫学杂志 1999V19N1 29-32

题　名：可溶性 TNF 受体在大肠杆菌中表达
作　者：梁小兵；周洁；刘学博；孔祥英；詹铁群；李胜华；郭庆福；高杰英；
出　处：中华微生物学和免疫学杂志 1999V19N1 76

题　名：50 年来我国蚊媒研究进展
作　者：陆宝麟；
出　处：中国媒介生物学及控制杂志 1999V10N3 161-165

题　名：成蚊对虫媒病毒中肠感染屏障及其机理的研究进展
作　者：谢超；杨发青；赵彤言；陆宝麟；
出　处：中国媒介生物学及控制杂志 1999V10N3 229-233

题　名：抗药性疟疾的化疗近况
作　者：单成启；张敏；
出　处：中国寄生虫病防治杂志 1999V12N2 147-149

题　名：1992-1996 年部队流行性出血热疫情分析
作　者：李升团；张习坦；韩光红；范国英；马静；徐静；

出　处：解放军预防医学杂志 1999V17N3 179-182

题　名：人免疫缺陷病毒的职业感染与预防
作　者：李敬云；
出　处：解放军预防医学杂志 1999V17N3 232-234

题　名：复方蒿甲醚和本芴醇胶丸治疗恶性疟疗效对比
作　者：孙志伟；单承启；李国福；王京燕；丁德本；刘光裕；焦岫卿；
出　处：实用寄生虫病杂志 1999V7N2 49-51

题　名：基因工程双特异抗体研究进展
作　者：步恒富；祝庆余；李钟铎；杨同书；
出　处：生物技术通讯 1999V10N1 33-37

题　名：五十年来中国的蚊类生物系统学研究
作　者：陆宝麟；赵彤言；
出　处：寄生虫与医学昆虫学报 1999V6N2 65-72

题　名：人蚤实验种群的建立和保持以及遗传稳定性的监测
作　者：鲁亮；吴厚永；钱存宁；
出　处：寄生虫与医学昆虫学报 1999V6N2 116-119

题　名：蚊虫的人工膜养殖技术进展
作　者：张洪杰；
出　处：寄生虫与医学昆虫学报 1999V6N2 120-128

题　名：伯氏疏螺旋体鞭毛蛋白特异性区段的基因克隆和表达
作　者：李新军；张启恩；张祥河；戴小红；张习坦；

出　处：中国人兽共患病杂志 1999V15N4 24-27

题　名：兔衣原体病病原体的分离及鉴定
作　者：端青；赵忠利；田青；张国珍；
出　处：中国人兽共患病杂志 1999V15N4 55-56

题　名：登革病毒E蛋白区段基因克隆及高效表达
作　者：郭庆福；詹轶群；逯好英；周洁；李胜华；梁小兵；
出　处：中华微生物学和免疫学杂志 1999V19N4 334-337

题　名：肠粘膜上皮细胞的免疫学功能
作　者：石宇甫；
出　处：国外医学・免疫学分册 1999V22N4 203-206

题　名：核酸诊断技术规范化的研究
作　者：杨瑞馥；郭兆彪；张敏丽；汪晓辉；宋亚军；王津
出　处：生物技术通讯 1999V10N2 81-88

题　名：IL-1活性测定方法的改进及应用
作　者：詹轶群；周洁；郭庆福；
出　处：生物技术通讯 1999V10N2 138

题　名：病毒分子生物学诊断方法的应用进展
作　者：步恒富；
出　处：生物技术通讯 1999V10N2 145-147

题　名：整合素α4β7研究进展
作　者：刘永全；
出　处：生物技术通讯 1999V10N2 152-154

题　名：尖音库蚊复合组杂交子一代4龄幼虫形态性状的研究
作　者：赵彤言；董言德；朱礼华；陆宝麟；
出　处：昆虫学报 1999V42N3 264-269

题　名：微孔滤膜空气微生物采样器的研制
作　者：胡庆轩；车凤翔；徐秀芝；姜黎；鹿建春；刘敏霞；
出　处：卫生研究 1999V28N1 255-256

题　名：军队传染病防制及其流行病学研究的成绩和经验
作　者：张习坦；
出　处：中华流行病学杂志 1999V20N4 196-199

题　名：不同基因型丙型肝炎病毒混合感染者体内丙型肝炎病毒基因型和序列的分布
作　者：宋宏彬；王海涛；唐时幸；吉保新；王飞祥；张习坦；
出　处：中华流行病学杂志 1999V20N4 227

题　名：部分国产艾滋病病毒抗体检测试剂临床应用质量评价
作　者：李敬云；鲍作义；吕富双；王宏霞；
出　处：中华流行病学杂志 1999V20N4 230-233

题　名：重组酵母乙型肝炎疫苗应用于乙型肝炎病毒感染者的免疫效果
作　者：管荣斌；韩光红；张习坦；杨红；
出　处：中华流行病学杂志 1999V20N4 246

题　名：丙型肝炎的辅助T细胞免疫研究进展
作　者：汪涛；郭华[illegible]；

出　处: 国外医学·病毒学分册 1999V6N2 51-53

题　名: 口服青蒿琥酯对伯氏鼠疟和诺氏猴疟的杀灭效果
作　者: 时云林; 李国福; 赵京花; 杨俊德; 丁德本;
出　处: 中国药理学报 1999V20N8 755-758

题　名: α4β7研究进展
作　者: 刘永全;
出　处: 微生物学免疫学进展 1999V27N3 75-77

题　名: 长毛铗蠓和满载铗蠓二新种描述(双翅目:蠓科)
作　者: 虞以新; 刘金华;
出　处: 中国媒介生物学及控制杂志 1999V10N4 246-247

题　名: 杀虫剂处理军服布的防蚊效果
作　者: 董桂蕃; 李承毅; 舒国欣; 潘凤庚; 曹勇平; 程JIN华;
　　　　董言德; 胡渠;
出　处: 中国媒介生物学及控制杂志 1999V10N4 274-277

题　名: 复方蒿甲醚的一般药理学
作　者: 王京燕; 叶洪金; 李培忠;
出　处: 中国药理学与毒理学杂志 1999V13N3 226

题　名: 土拉弗朗西斯氏菌 PCR-EIA 检测技术的研究
作　者: 张敏丽; 郭兆彪; 汪晓辉; 杨瑞馥;
出　处: 解放军预防医学杂志 1999V17N4 264-266

题　名: 1998 年长江抗洪抢险部队卫生防病基本情况调查
作　者: 韩光红; 翁守能; 刘双喜; 韩德奎; 王福玉; 王赤才;

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[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]

题 名: 粘膜免疫进展
作 者: 白雪源;
出 处: 国外医学·免疫学分册 1999V22N5 255-259

题 名: 复方苯芴醇治疗索马里恶性疟的疗效观察
作 者: 时云林; 丁德本; 崔世斌; 齐英杰;
出 处: 中国寄生虫病防治杂志 1999V12N3 173-174

题 名: 丙型肝炎病毒基因变异与免疫
作 者: 徐俊杰;
出 处: 国外医学·流行病学传染病学分册 1999V26N1 22-26

题 名: 抗凝血鼠药抗药性对英国鼠防工作影响
作 者: 董天义;
出 处: 医学动物防制 1999V15N1 56-57

题 名: 溴敌隆毒饵防制两种家栖鼠的实验室效果
作 者: 王寿全; 董天义; 常涛;
出 处: 中国媒介生物学及控制杂志 1999V10N1 15

题 名: 吸入毒理学的概况及在我国的进展
作 者: 李军保; 车凤翔;
出 处: 中华劳动卫生职业病杂志 1999V17N1 57-59

题 名: 嘉马拉雅山南坡蚤类营养生态位的研究
作 者: 郭天宇; 许荣满;
出 处: 应用生态学报 1999V10N1 67-70

题　名：稀有密码子对大肠埃希菌表达外源蛋白的影响
作　者：梅俊杰;
出　处：国外医学·微生物学分册 1999V22N1 24-27

题　名：鼻相关淋巴组织及其免疫应答
作　者：刘育红;
出　处：上海免疫学杂志 1999V19N1 59-61

题　名：牙髓紫叶淋菌内毒素对炎症性细胞因子的介导作用
作　者：萌俊; 王忠泽; 侯晓军; 陈跃峰; 张松乐; 张郁; 孙叶方;
出　处：微生物学通报 1999V26N1 37-41

题　名：抗-HCV 阳性血引发感染的核酸证据
作　者：步恒富; 马立人; 李钟铎; 祝庆余;
出　处：中国公共卫生 1999V15N2 83-84

题　名：橡树岭车团菌的分离及用 16S rDNA 测序法的鉴定
作　者：杨瑞馥; 汪晓辉; 李崇辉; 郭兆彪; 张敏丽; 周方;
　　　　高树德;
出　处：微生物学免疫学进展 1999V27N1 1-5

题　名：hIL-16cDNA 的克隆、测序及在 E.coli 中的表达与纯化
　　　　研究
作　者：杜勇; 杜桂鑫; 侯利华; 汪涛; 王海涛;
出　处：细胞与分子免疫学杂志 1999V15N1 25-27

题　名：丙型肝炎病毒基因高变区变异的动力学研究
作　者：潘文胜; 王海涛; 郭华章; 汪涛; 骆抗生;
出　处：病毒学报 1999V15N1 29-35

题 名：[illegible]
作 者：李[illegible]
出 处：中国[illegible]

题 名：[illegible]
作 者：曹[illegible]
出 处：中国[illegible]

题 名：[illegible]
作 者：潘[illegible]
出 处：中华[illegible]

题 名：[illegible]
作 者：毛春生[illegible]
出 处：中华[illegible]

题 名：[illegible]
作 者：郭[illegible]
出 处：中国[illegible]

题 名：动物[illegible]
作 者：[illegible]
出 处：国外医学·[illegible]

题 名：我国[illegible]
作 者：赵[illegible]
出 处：寄生虫与医学昆虫学报[illegible]

题　名：PCR 检测蜱中查菲埃立克林 DNA 及其序列分析
作　者：曹务春；张泮河；张习坦；戴晓红；许荣满；
出　处：寄生虫与医学昆虫学报 1999V6N1 58-63

题　名：产黑普氏菌内毒素脂多糖的免疫生物学活性研究
作　者：萌俊；张松乐；侯晓军；陈跃峰；王忠泽；张郁；孙叶方；
出　处：中华微生物学和免疫学杂志 1999V19N2 94-96

题　名：鼠类对抗凝血灭鼠剂敏感性或抗药性测定指导
作　者：董天义；
出　处：医学动物防制 1999V15N3 164-166

题　名：嗜高温酶研究进展
作　者：尹立新；焦克芳；
出　处：生命的化学 1999V19N2 75-77

题　名：重组 FAS 分子的表达、纯化及抗体制备
作　者：罗振革；孔祥英；彭虹；张明；高杰英；
出　处：中国生物化学与分子生物学报 1999V15N2 200-204

题　名：大肠杆菌基因工程菌在湖水中稳定性的初步研究
作　者：张松乐；陈梅玲；张朝隆；董泳仪；车凤翔；
出　处：中国卫生检验杂志 1999V9N2 120-122

题　名：两种空气微生物采样器对近地面海岸大气细菌采样效果比较
作　者：陈梅玲；张松乐；张朝隆；翟俊辉；车凤翔；
出　处：中国卫生检验杂志 1999V9N2 131-133

题　名：FAS 系统在病毒性肝细胞损伤中的作用
作　者：罗振革；
出　处：上海免疫学杂志 1999V19N2 121-123

题　名：复方蒿甲醚和组份之一本芴醇两种剂型治疗恶性疟疾临床对比试验
作　者：孙志伟；单承启；李国福；焦岫卿；刘光裕；丁德本；王京燕；
出　处：中国临床药理学与治疗学杂志 1999V4N1 21-24

题　名：生物传感器在微生物检测中的应用
作　者：翟俊辉；
出　处：国外医学・微生物学分册 1999V22N2 1-5

题　名：宫内胎儿沙眼衣原体感染一例分析
作　者：瑞青；赵忠利；田青；张国珍；霍秀勤；
出　处：中国实用妇科与产科杂志 1999V15N5 260

题　名：鼠药中毒症状、救治办法及预防措施
作　者：郭天宇；
出　处：医学动物防制 1999V15N4 221-223

题　名：1992-1996 年部队肺结核病报告发病分析
作　者：李升团；韩光红；张习坦；范国英；马静；徐静；
出　处：解放军预防医学杂志 1999V17N2 98-101

题　名：P~3|级微生物安全实验室防气溶胶扩散性能的检测
作　者：胡庆轩；车凤翔；
出　处：卫生研究 1999V28N3 177-178

题　名：汉坦病毒 H8205 部分核壳蛋白基因在 E.coli 中的表达
作　者：沈昌贤；李钟铎；杨瑞馥；祝庆余；
出　处：中国病毒学 1999V14N2 110-115

题　名：磷酸萘酚喹对大鼠肝细胞内磷脂和甘油三酯含量的影响
作　者：翟海峰；郭伯安；洪文甫；
出　处：中国药理学会通讯 1999V16N2 13-15

题　名：汉坦病毒的新威胁
作　者：李劲松；
出　处：微生物学免疫学进展 1999V27N2 71-75

题　名：亚甲蓝光敏法对人血浆中病毒的灭活研究
作　者：张文福；袁庆霞；王玄霞；李成文；刘育京；
出　处：中国消毒学杂志 1999V16N2 65-68

题　名：利用 RT-PCR 克隆人整合素分子α4 亚基 3.1Kb cDNA
作　者：刘永全；高杰英；彭虹；罗振革；孔祥英；梅俊杰；
出　处：微生物学杂志 1999V19N3 37

题　名：小鼠鼻粘膜痢疾杆菌感染/免疫模型的建立
作　者：曾关富；邢丽；刘育红；陈志华；高杰英；
出　处：微生物学杂志 1999V19N3 53

题　名：福氏 2a 宋内氏双价痢疾菌苗候选株的生物表型及稳定性
　　　　鉴定
作　者：曾关富；邢丽；刘育红；陈志华；高杰英；
出　处：微生物学杂志 1999V19N3 65

题　名：一种新病毒 TTV 的研究现况
作　者：王海涛；
出　处：中华流行病学杂志 1999V20N5 310-312

题　名：不同基因型丙型肝炎病毒混合感染者体内病毒优势基因型和优势序列的研究
作　者：宋宏彬；王海涛；唐时幸；吉保新；王天祥；张习坦；
出　处：中华肝脏病杂志 1999V7N 增刊 60-61

题　名：昆虫驱避剂驱蚊肤宁的高效液相色谱分析
作　者：王效义；尤洪涛；马宏安；詹桂番；
出　处：中国媒介生物学及控制杂志 1999V10N5 349-351

题　名：室内外空气真菌污染状况初探
作　者：胡庆轩；蔡增林；鲁志新；
出　处：上海环境科学 1999V18N10 454-456

题　名：用 UDPE 技术检测和鉴定鼠疫耶尔森氏菌
作　者：郭兆彪；张敏丽；汪晓辉；王津；杨瑞馥；张春华；
丛显斌；张景林；
出　处：中国地方病防治杂志 1999V14N5 262-265

5．本研究所 1999 年研究或（和）发展的领域有战剂微生物及毒素快速诊检鉴定技术研究，包括土拉弗氏菌、炭疽杆菌、鼠疫耶尔森氏菌、东方马脑炎病毒、西方马脑炎病毒、森林脑炎病毒、基孔肯亚病毒、葡萄球菌肠毒素、Q 热、立氏立克次体、斑点热立克次体等；部队常见传染病防治研究，包括病毒性肝炎、登革热防治研究；痢疾工程菌苗研究；疟疾防治药物研究；莱姆病诊断防治研究；重要传染媒介防治药械及综合防治措施研究；微生物气溶胶采样器研制；重要自然疫源性疾病信息咨询系统研究。

信任措施“B”：关于突发传染病和毒素引起的类似情况资料

（一）关于突发传染病的背景资料（每年的病例数）

疾病	1999 发病数
鼠疫	16
霍乱	4570
肝炎	853761
痢疾	568682
伤寒	47977
艾滋病	80
流脑	
出血热	46373
狂犬病	373
布氏病	1467
炭疽	571
斑疹伤寒	5610
乙型脑炎	8108
黑热病	131
疟疾	27468
登革热	1306

注：表内数据为 1999 年 1-12 月的统计数字

信任措施“D”：积极促进联系

中国鼓励从事与公约直接有关的生物科学家之间的联系、接触与协作研究，2000年在中国将召开如下国际会议：

会议名称：第四届中美实验室管理会议
会议组织：国家卫生部临检中心
时　　间：2000年5月
地　　点：北京市
会　　期：2天
参加人数：100人

会议名称：IFCC实验室管理和技术研讨会
会议组织：国家卫生部临检中心与检验分会
时　　间：2000年5月
地　　点：北京市
会　　期：2天
参加人数：100人

会议名称：第三届感染性疾病国际研讨会
会议组织：中华医学会
时　　间：2000年8月
地　　点：待定
会　　期：3天
参加人数：200—300人

CUBA

10 June 2000

La Misión Permanente de Cuba ante las Naciones Unidas saluda atentamente al Departamento de Asuntos de Desarme de la Organización de las Naciones Unidas y con referencia al párrafo operativo 4 de la Resolución 54/61, titulada Convención sobre la prohibición del desarrollo, la producción y el almacenamiento de armas bacteriológicas (biológicas) y toxínicas y sobre su destrucción, tiene el honor de trasladar la información preparada por la República de Cuba.

ANEXO DE LA DECLARACION FINAL SOBRE MEDIDAS DE FOMENTO DE LA CONFIANZA.

En la tercera Conferencia de examen se convino en que todos los Estados Partes presentarán la siguiente declaración:

I. Formulario de la declaración sobre "Nada que Declarar" o "Nada Nuevo que Declarar"

Medida A	Nada que Declarar	Nada Nuevo que Declarar
A, Parte 1	( )	(X)
A, Parte 2 (i)	( )	(X)
A, Parte 2 (ii)	( )	(X)
A, Parte 2 (iii)	( )	(X)
B (i)	( )	( )
B (ii)	( )	(X)
C	( )	( )
D	( )	( )
E	( )	(X)
F	( )	(X)
G	( )	(X)

(MARQUESE CON UNA CRUZ, LA O LAS CASILLAS APROPIADAS CON RESPECTO A CADA MEDIDA)

FECHA: 6 de Abril del 2000

ESTADO PARTE EN LA CONVENCIÓN: República de Cuba

MEDIDA B i

ANTECEDENTES SOBRE BROTES DE ENFERMEDADES INFECCIOSAS DE LAS QUE HAY QUE INFORMAR

ENFERMEDADES EN HUMANOS	NUMERO DE CASOS POR AÑOS				
	1996	1997	1998	1999	2000
Hepatitis viral	17693	23881	24657	16986	18026
EDA	1016863	1000568	1009464	967112	954158
Intoxicacion Alimentaria	8496	15008	10729	16995	12352
Fiebre tifoidea	111	76	42	137	[illegible]
Leptospirosis	2191	1494	1077	884	821
Brucelosis	29	31	18	-	-

ENFERMEDADES EN ANIMALES	NUMERO DE CASOS POR AÑOS				
	1996	1997	1998	1999	2000
Cólera porcino clásico	257	-	-	-	-
Gusano barrenador del ganado	693	N/d	2737	[illegible]	11857
Brucelosis bovina	297	N/d	259	221	56
Enfermedades de las mucosas de los bufalos	1	N/d	-		-
Varroa	118	N/d	247	531	945

ENFERMEDADES EN PLANTAS	NUMERO DE CASOS POR AÑOS				
	1996	1997	1998	1999	2000
Toxoptera citricida	41	160	125	27	82
Phyllonicstis citrella.	36	78	84	76	76
CTV	125	225	225	82	82
Thrips palmi	-	6	8	28	14
Steneotarzonemus spinki	-	3	7	18	18
Diaphorina citri	-	-	-	15	152
Hypothenemus hampei	-	-	2	5	31

CENTRO DE INGENIERIA GENETICA Y BIOTECNOLOGIA.

Las publicaciones de los resultados obtenidos en las diferentes investigaciones biológicas efectuadas en el CIGB y que son objeto de intercambio de información se encuentran localizadas en revistas como son:

Biotecnología Aplicada
Vaccine
Veterinary Parasitology
Transgenics
Theriogenology
Molecular Reproduction Development
Journal of Biotechnology
Biological Research
Immunotechnology

CENTRO DE INVESTIGACIONES CIENTIFICAS DE LA DEFENSA CIVIL.

Diagnóstico serológico del VIH-1 en muestras de sangre seca en papel de filtro por el sistema DAVIH Dot VIH-1
Silva M. T., Lastre A. J., Díaz H. Y Montano L.
Rev. Cubana de Medicina Tropical 50(3):221-2, 1998.

Effect of different adyuvants and immunomodulators on the humoral response of rabbits and mice against HIV-1 derived Multiepitope polypeptides.
Herrera A., Vázquez D., Navea L., Lobaina L., Quintana B., Nápoles A., García V. and Duarte C. A.
Biotecnología Aplicada 16:103-108. 1999.

Evaluación del Sistema DAVIH TBB para el diagnóstico de la tuberculosis bovina en Argentina.
Silva, E., Nibot, C., González N. Y colaboradores.
Revista de Medicina Veterinaria de Argentina 1999.

Anticuerpos neutralizantes frente a cinco cepas de VIH-1 en macacos inmunizados con el polipéptido multiepitópico TAB-9.
Navea, L., Lobaina, L., Dubed, M. y colaboradores.
Revista Cubana de Medicina Tropical, 1999.

V3 Loop based Multi-Epitope polypeptide TAB 9 adyuvated with Montanide ISA 720 is highly immunogenic in non human primates and induces neutralizing antibodies against five HIV isolates.
Gómez CE., Navea L., Lobaina L., Dubed M., Expósito N., Soto A. and Duarte CA.
Vaccine 17:2311-2319, 1999.

Definición de caso y clasificación de la infección por VIH
Díaz H.
Revista Cubana de Medicina 37(3):157-65, 1998.

Bioseguridad y microorganismos modificados genéticamente.
Regalado L., González N. y Alfonso M. J.
Revista CENIC de Ciencias Biológicas, 1999. En Prensa

Inactivación del VDVB (Modelo Experimental del VHC) por pH bajo y tratamiento por calor. En inmunoglobulina humana endovenosa.

Preliminary Assesment of the safety and Immunogenicity of a new CTX -Negative, Hemagglutinin/ Protease -Defective El Tor Strain as a cholera Vaccine Candidate
Benitez Jorge A., Garcia Luis, Silva Anisia y colaboradores.
Infection Immunity. 1999; 67(2): 539-545.

Expression of the *Vibrio cholerae* toxin binding subunit in a live recombinant vector Salmonella typhi Ty21a.
Aguila A., Herrera-Puerta, Ana Gloria; Estévez-Fernández; Pedro Rogelio y colaboradores
Applied Biotechnology. 2000; 17(1).

Virulence enhancement substances for *Haemophilus influenzae* type b in mice
Sifontes S; Infante JF, y colaboradores.
Laboratory Animal Science. 1999; 49(1): 95-98.

Cinética de crecimiento y expresión de Pilina Corregulada con la Toxina (TCP) de cultivos en fermentación de la cepa 638 de *Vibrio cholerae*.
Talavera, A; Riveron, L. y colaboradores.
Vaccimonitor. 1999; 8(7): 2-4

Mice immunization with gel electrophoresis micropurified bacterial lipopolysaccharides.
Pupo, Elder;; Aguila, Antonio; Santana, Hector;; Nuñez, Juan Francisco; Castellanos-Serra, Lila; and Hardy, Eugenio.
Electrophoresis. 1999; 49 (1): 95-98.

CENTRO NACIONAL DE INVESTIGACIONES CIENTIFICAS.

Desarrollo de las Aplicaciones de los marcadores moleculares en el mejoramiento de la caña de azucar en Cuba.
Cornide, M.T.; Coto O. y colaboradores.
Biotecnologia Aplicada , 16: 186-189, 1999.

Efecto del policosanol sobre las enzimas microsomales hepáticas en ratas Sprague Dawley.
Valdes S, Molina V, y colaboradores.
Revista CENIC Ciencias Biológicas, 31, 1999

Biologia molecular de *Entamoeba histolytica*.
Orozco E.; Rodriguez M.A.; Báez- Camargo M.; Riveron A.M.
Libro de texto del Programa de Biomedicina Molecular de CICATA-IPN, México DF. Cap.18, p.267. 1999

Efecto de metales pesados sobre microalgas inmovilizadas.
Travieso, L., Cañizares O. y colaboradores.
Revista CENIC Ciencias Biológicas, 30:27-30, 1999.

Developmental toxicity of D-002 (a mixture of aliphatic primary alcohols) in rats and rabbits.
Rodriguez MD; Gámez R; Sánchez M; Garcia H
J. Appl. Toxicol.; 18:313-16, 1999.

MEDIDA D

PROMOCIÓN ACTIVA DE LOS CONTACTOS

Conferencias, simposios y seminarios internacionales previstos y demás foros análogos de intercambio.

1. En relación con cada uno de tales acontecimientos se debe proporcionar la información siguiente:

Nombre de la conferencia, etc ____________________

Entidades organizadoras, etc ____________________

Fecha de celebración ____________________

Lugar de celebración ____________________

Temas principales de la conferencia, etc ____________________

Condiciones de participación ____________________

Puntos de contacto para más información, inscripción, etc ____________________

- III Taller de Colecciones de Cultivos Microbianos, IPK/mayo 1999.
- II Taller Nacional de Marcadores Moleculares de la Caña de Azucar. INICA/febrero 1999.
- Fórum de la Facultad de Biología. / abril 1999. Universidad de La Habana.
- II Convención Internacional sobre Medio Ambiente y Desarrollo, junio/1999. CITMA.
- Congreso Internacional del Centro de Ingeniería Genética y Biotecnología, noviembre/1999.
- Taller Gumboro, LABIOFAM/ agosto/1999.
- Curso Internacional de Bioseguridad en la Medicina Veterinaria. Centro Nacional de Seguridad Biológica y Consejo Científico Veterinario, septiembre/ 1999.
- Curso Internacional de Bioseguridad en la Sanidad Vegetal. Centro Nacional de Seguridad Biológica /octubre/1999.
- V Seminario Internacional sobre armonización de registros de medicamentos. LABIOFAM/agosto/1999.

2. Información relativa a otras oportunidades.

- V Congreso Nacional de Ciencias Veterinarias del 19 al 23 de junio del 2000. Palacio de Convenciones Ciudad de La Habana Cuba.
- XIII Seminario Científico del Centro Nacional de Investigaciones Científicas. 27 -30 de junio del 2000. Recinto ferial de EXPOCUBA. Ciudad de La Habana. Cuba. (Inscripción Dr.Héctor L López). Fax (537) 280497.
- Curso especializado de Bioseguridad y Seguridad Integral en la Biotecnología. Centro de Ingeniería Genética y Biotecnología /octubre del 2000.

CZECH REPUBLIC

6 April 2000

The Permanent Mission of the Czech Republic to the United Nations presents its compliments to the Under-Secretary-General for Disarmament Affairs, and with reference to the operative paragraph 4 of the resolution 54/61 calling upon all States parties to the Convention on the Prohibition of the Development, Production and Stockpiling of the Biological and Toxin Weapons to participate in the exchange of information and data agreed to in the Final Declaration of the Third Review Conference, has the honour to convey the requested information and data.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐	☒
B (ii)	☐	☒
C	☐	☒
D	☐	☒
E	☐	☒
F	☐	☒
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: March 21, 2000

State Party to the Convention: Czech Republic

Ministry of Education, Youth and Spor

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Northing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☑	☐
A, part 2 (i)	☑	☐
A, part 2 (ii)	☑	☐
A, part 2 (iii)	☑	☐
B (i)	☑	☐
B (ii)	☑	☐
C	☑	☐
D	☑	☐
E	☑	☐
F	☑	☐
G	☐	☑

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: March, 21 2000

State Party to the Convention: The Czech Republic

Ministry of Industry and Trade

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Northing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐	☒
B (ii)	☐	☒
C	☐	☐
D	☐	☒
E	☐	☒
F	☐	☒
G	☒	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 23 FEBRUARY 2 000

State Party to the Convention: Czech Republic

Ministry of Defence

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Institute for Immunology, Purkyně
Military Medical Academy, Hradec Král

2. Responsible public or private organization or company Ministry of Defence, Czech Republic

3. Location and postal address 561 66 Těchonín

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

The Institute is wholly financed by the Ministry of Defence, some activities are supported by the Grant Agency of the Czech Republic and by NATO Linkage Grant

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

6. If no maximum containment unit, indicate highest level of protection

BL - 2

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Main activities are focused on the study of cellular and molecular regulatory mechanisms of immune response against intracellular pathogens and testing of atternated strain Francisella tularensis LVS - it was used for immunological studies.

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 2 (i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

~~Yes~~/No

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

~~Yes~~/No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (iii)

National biological defence research and development programme

Facilities

Complete a form for each facility declared in accordance with paragraph 3 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

2. Where is it located (include both address and geographical location)?

3. Floor area of laboratory areas by containment level:

BL2 ______________________ (sqM)

BL3 ______________________ (sqM)

BL4 ______________________ (sqM)

Total laboratory floor area ______________________________ (sqM)

4. The organizational structure of each facility.

(i) Total number of personnel ________________

(ii) Division of personnel:

Military ________________

Civilian ________________

(iii) Division of personnel by category:

Scientists ________________

Engineers ________________

Technicians ________________

Administrative and support staff ________________

(iv) List the scientific disciplines represented in the scientific/engineering staff.

(v) Are contractor staff working in the facility? If so, provide an approximate number.

(vi) What is (are) the source(s) of funding for the work conducted in the facility including indication if activity is wholly or partly financed by the Ministry of Defence?

(vii) What are the funding levels for the following programme areas:

Research ____________________

Development ____________________

Test and evaluation ____________________

(viii) Briefly describe the publication policy of the facility:

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

---

* Including viruses and prions.

Form B (1)

Background information on outbreaks of reportable infectious diseases

Disease		Number of cases per year			
	1995	1996	1997	1998	1999
	null	null	null	null	null

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

null

1. Time of cognizance of the outbreak ....

2. Location and approximate area affected ....

3. Type of disease/intoxication ....

4. Suspected source of disease/intoxication ....

5. Possible causative agent(s) ....

6. Main characteristics of systems ....

7. Detailed symptoms, when applicable
   - respiratory ....
   - circulatory ....
   - neurological/behavioural ....
   - intestinal ....
   - dermatological ....
   - nephrological ....
   - other ....

8. Deviation(s) from the normal pattern as regards
   - type ....
   - development ....
   - place of occurrence ....
   - time of occurrence ....
   - symptoms ....
   - virulence pattern ....

- drug resistance pattern ....
- agent(s) difficult to diagnose ....
- presence of unusual vectors ....
- other ....

9. Approximate number of primary cases ....
10. Approximate number of total cases ....
11. Number of deaths ....
12. Development of the outbreak ....
13. Measures taken ....

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. ....
- arranging organization(s), etc. ....
- time ....
- place ....
- main subject(s) for the conference, etc. ....

....

- conditions for participation ....

....

- point of contact for further information, registration, etc. ....

....

....

2. Information regarding other opportunities

See Annex I - List of selected publications
....

....

....

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures	Amended since last year
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO
(b) Exports of micro-organisms* and toxins	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO
(c) Imports of micro-organisms* and toxins	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO	~~YES~~/NO

---

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party.

2. Past offensive biological research and development programmes:

   - ~~YES~~ - NO

   - Period(s) of activities

   - Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.

3. Past defensive biological research and development programmes:

   - YES - ~~NO~~

   - Period(s) of activities 1961 - 1980

   - Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

Research work in the field of Biological Defence Research has always had exclusively defensive character, it has never been concerning the development of offensive biological weapons and was conducted in the following areas: respiratory infections, pathogenesis of some infectious diseases, rapid laboratory diagnostic methods, immunoprophylaxis, chemoprophylaxis, antibioprophylaxis and therapy, relation between radiation and intoxication, modernization of disinfection means, etc.

Form G

Declaration of vaccine production facilities

1. Name of facility:

2. Location (mailing address):

3. General description of the types of diseases covered:

Annex 1

List of selected publications

[1] FEDER, H., BERAN, J., VAN HOECKE, CH., ABRAHAM, B., DE CLERCQ, N., BUSCARINO, CH., PARENTI, D. Immunogenicity of a recombinant Borrelia burgdorferi outer surface protein A vaccine against Lyme disease in children. *The Journal of Pediatrics*, 1999, vol. 5, p. 575 - 579

[2] KOUKALOVÁ, D., KROČOVÁ, Z., VÍTEK, P., MACELA, A., HÁJEK, V. Immunostimulatory activity of the vaccine used in the treatment of recurrent urinary infections. *Bratislavské lékařské listy*, 1999, vol. 100, (№ 4), p. 215-217

[3] KOUKALOVÁ, D., KROČOVÁ, Z., VÍTEK, P., MACELA, A., HÁJEK, V. Immunostimulatory activity of the vaccine used in the treatment of recurrent urinary infections. *Bratislavské lékařské listy*, 1999, vol. 100, (№. 3), p. 129-134

[4] KROČA, M., HERNYCHOVÁ, L., SJÖSTEDT, A. Susceptible allele of the Bcg locus confer resistance to infection by Francisella tularensis LVS. *Journal of Leukocyte Biology*, *Supplement*, 1999, p. 30

[5] PRYMULA, R., MACHULA, F., BERAN, J. Meningococcal disease control in the Czech Army - succesful immunisation strategy. *The Journal of Antimicrobial Chemotherapy*, 1999, vol. 1999, (№ 44), p. 104

[6] STULÍK, J., HERNYCHOVÁ, L., MACELA, A., KROČOVÁ, Z., KROČA, M. Production of Stress-Inducible Form of Heat-Shock Protein 70 in Mouse Peritoneal Adherent Cells after in Vivo Infection by F. tularensis. *Folia Microbiol*, 1999, vol. 44, (№ 3), p. 306-310

[7] ŠPLIŇO, M., HARTMANOVÁ, M. Application of foams for surface decontamination in natural foci. In *Sborník přednášek - 4th international workshop on chemical and biological agents: detection and decontamination*. Chicago, USA : IIT Research Institute, 1999, p. 17 - 18

[8] ŠPLIŇO, M., HARTMANOVÁ, M. Experimental results of testing Iodophores based upon iodine - polyvinylpyrrolidone used for decontamination. In *Sborník přednášek - 4th international workshop on chemical and biological agents: detection and decontamination*. Chicago, USA : IIT Research Institute, 1999, p. 16

[9] VAN HOECKE, CH., LEBACQ, E., BERAN, J., PARENTI, D. Alternative Vaccination Schedules (0, 1, and 6 Months Versus 0, 1, and 12 Month) for a Recombinant OspA Lyme Disease Vaccine. *Clinical Infectious Diseases*, 1999, vol. 28, p. 1260-4

ZÚ WashingtonTIC8.3.2000

OSN /
[illegible]
(prosím zajistit včas do 15. 4.)
T.

Pro MZV: OSN, AMER, VŘ SMV
Pro SM NY: zasláno přímo

Č.j.: 867/2000-Wash

Věc: Nóta State Departmentu - výzva k poskytnutí deklarací stran CBTW

V příloze zasíláme znění nóty, kterou jsme obdrželi 2. března 2000 ze State Departmentu, vyzývající k včasnému poskytnutí informací ohledně implementace dodatečných opatření na posilování důvěry podle rozhodnutí třetí hodnotící konference ke Konvenci o zákazu vývoje a výroby biologických zbraní a jejich zničení.

Jan Maisler
Schválil: Antonín Hradílek, zástupce vyslance

Příloha

The Secretary of State presents her compliments to their Excellencies and Messieurs and Mesdames the Chiefs of Mission of the Governments concerned with the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, which was done at Washington, London and Moscow on April 10, 1972.

In performance of the depositary duties of the Government of the United States of America under the Convention, the Secretary of State has the honor to inform the Chiefs of Mission of the decision of the Third Review Conference of the aforementioned Convention, held in September 1991, and reaffirmed at the Fourth Review Conference in December 1996, to implement additional Confidence Building Measures and to strengthen the Confidence Building Measures adopted in 1986. These measures, in the form of data declarations, are to be completed and forwarded to the United Nations Department of Disarmament Affairs no later than April 15 on an annual basis.

The Secretary of State takes this opportunity to remind the Chiefs of Mission of this commitment and encourages their respective Governments to meet the formal deadline for submission of data to the United Nations Disarmament Directorate.

The Secretary of State would be grateful if the Chiefs of Mission would forward this information to their respective Governments.

Department of State,
Washington, February 22, 2000.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Northing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☒	☐
A, part 2 (ii)	☒	☐
A, part 2 (iii)	☒	☐
B (i)	☒	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☐	☒ SEE NOTICE
F	☒	☐
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 1. 3. 2000

State Party to the Convention: MINISTRY OF AGRICULTURE

Czech Republic

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ STATE VETERINARY INSTITUTE
FMD DIAGNOSTIC LABORATORY

2. Responsible public or private organization or company MINISTRY OF AGRICULTURE

3. Location and postal address 15603 PRAGUE 6, LYSOLAJE
SIDLISTNI 156

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

MINISTRY OF AGRICULTURE - WHOLLY

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

1 , 16,1 m^2

6. If no maximum containment unit, indicate highest level of protection

BL - 4

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

LABORATORY FOR DIAGNOSTIC OF FOOT AND MOUTH DISEASE
AND VESICULAR SWINE DISEASE NO ROUTINE USE OF LIVE VIRUS,
NO BIOLOGICAL DEFENCE RESEARCH AND DEVELOPEMENT PROGRAMME

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 2 (i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

~~Yes~~/No

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes/No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (iii)

National biological defence research and development programme

Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

2. Where is it located (include both address and geographical location)?

3. Floor area of laboratory areas by containment level:

BL2 ______________________________ (sqM)

BL3 ______________________________ (sqM)

BL4 ______________________________ (sqM)

Total laboratory floor area ____ (sqM)

4. The organizational structure of each facility.

(i) Total number of personnel	________________________
(ii) Division of personnel:	
Military	________________________
Civilian	________________________
(iii) Division of personnel by category:	
Scientists	________________________
Engineers	________________________
Technicians	________________________
Administrative and support staff	________________________

(iv) List the scientific disciplines represented in the scientific/engineering staff.

(v) Are contractor staff working in the facility? If so, provide an approximate number.

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

(vii) What are the funding levels for the following programme areas:

Research ____________________

Development ____________________

Test and evaluation ____________________

(viii) Briefly describe the publication policy of the facility:

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

---

* Including viruses and prions.

Form B (i)

Background information on outbreaks of reportable infectious diseases

Disease	Number of cases per year				
	1988	1989	1990	1991	1992

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1. Time of cognizance of the outbreak ....

2. Location and approximate area affected ....

3. Type of disease/intoxication ....

4. Suspected source of disease/ intoxication ....

5. Possible causative agent(s) ....

6. Main characteristics of systems ....

7. Detailed symptoms, when applicable

   - respiratory ....
   - circulatory ....
   - neurological/behavioural ....
   - intestinal ....
   - dermatological ....
   - nephrological ....
   - other ....

8. Deviation(s) from the normal pattern as regards

   - type ....
   - development ....
   - place of occurrence ....
   - time of occurrence ....
   - symptoms ....
   - virulence pattern ....

- drug resistance pattern ....
- agent(s) difficult to diagnose ....
- presence of unusual vectors ....
- other ....

9. Approximate number of primary cases ....
10. Approximate number of total cases ....
11. Number of deaths ....
12. Development of the outbreak ....
13. Measures taken ....

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. ....
- arranging organization(s), etc. ....
- time ....
- place ....
- main subject(s) for the conference, etc. ....

....

- conditions for participation ....

....

- point of contact for further information, registration, etc. ....

....

....

2. Information regarding other opportunities

....

....

....

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures	Amended since last year
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES/~~NO~~	YES/~~NO~~	YES/NO	YES/~~NO~~
(b) Exports of micro-organisms* and toxins	YES/~~NO~~	YES/~~NO~~	YES/NO	YES/~~NO~~
(c) Imports of micro-organisms* and toxins	YES/~~NO~~	YES/~~NO~~	YES/NO	YES/~~NO~~

A NEW ACT No 166/199 CONCERNING VETERINARY CARE AND AMENDING SOME RELATED LAWS (THE VETERINARY ACT) WAS ADOPTED.

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* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party.

2. Past offensive biological research and development programmes:

   - YES - NO

   - Period(s) of activities

   - Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.

3. Past defensive biological research and development programmes:

   - YES - NO

   - Period(s) of activities

   - Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

Form G

Declaration of vaccine production facilities

1. **Name of facility:**

2. **Location (mailing address):**

3. **General description of the types of diseases covered:**

PRODUCTION OF VACCINES FOR ANIMALS

MAILING ADDRESS:

1. BIOVETA
KOMENSKÉHO 212
683 23 IVANOVICE NA HANÉ

2. DYNTEC
PRAŽSKÁ 328
411 55 TEREZÍN

Form G

Declaration of vaccine production facilities

Number of the customs tariff: 3002

Human blood, animal blood for therapeutical, prophylactic or therapeutical purposes, anti-sera and other blood elements and modified immunological products, also gained from biotechnological processes, vaccination substances, toxins, cultures of micro-organisms, etc.

blood, anti-sera and plasma being subject to a licence proceedings also before April 1, 1998, i.e. before the last amendment of the Licence Decree

vaccination substances are incorporated into the licence regime since April 1, 1998

1) 2) 3)

Biopharm, a.s. VÚBVL (Research Institute of Biopharmacy and Veterinary Medicaments)
Pohoří-Chotouň
254 49 Jílové u Prahy
produces a vaccine against coccidiosis of poultry - LIVACOC (a live weakened vaccine against diarrhoea of poultry, this illness is not contagious to a man) for inland consumption as well as for exports

Bioveta, s.r.o. (Ltd)
Komenského 212
683 23 Ivanovice na Hané
produces veterinary immunobiological preparations

Dyntec, s.r.o. (Ltd)
Pražská 328
Terezín
produces immunobiological preparations, vaccines for veterinary medicine

Sevac a.s. (Inc)
Sevapharma, a.s.
Korunní 108
101 03 Praha 10
produces human immunopreparations (vaccines, allergens, blood derivates)

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Northing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☒	☐
A, part 2 (ii)	☒	☐
A, part 2 (iii)	☒	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☐	☐
D	☐	☐
E	☐	☒
F	☐	☒
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: March 10, 2000

State Party to the Convention: Czech Republic

Ministry of Health

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. **Name(s) of facility 2/** SEVAC spol. s.r.o.

2. **Responsible public or private organization or company** Private company

3. **Location and postal address**
Korunní 108
101 03 Prague 10
Czech Republic

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Private company

5. **Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)**

none

6. **If no maximum containment unit, indicate highest level of protection**

Containment P3

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

Production and research of Vaccines, Sera and Diagnostics for human use. Among others, vaccines and diagnostics for the following agents are produced: Diphteria toxin, Clostridium tetani, Cl. hystolyticum, Cl. perffrigens /Welchii/, Cl. oedematiens /Novyii/, Cl. septicum toxins

---

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Dyntec spol. s.r.o.

2. Responsible public or private organization or company Private company

3. Location and postal address

Pražská 328
411 55 Terezin
Czech Republic

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Private company

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

180 m^2

6. If no maximum containment unit, indicate highest level of protection

P-4

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Diagnostic activities. Production of microbiological diagnostic sets.

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ National Reference Laboratory on HIV/AIDS

2. Responsible public or private organization or company
Centre of Epidemiology and Microbiology
National Institute of Public Health

3. Location and postal address
Šrobárova 48
100 42 Prague 10
Czech Republic

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Health of the Czech Republic

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

Two containment units Risk group III /both-41 m^2/, with two Biological safety cabinets /class II/

6. If no maximum containment unit, indicate highest level of protection

see no. 5

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Diagnosis and research of HIV infections

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Institute of Medical Biology Laboratory
Laboratory of Genetics

2. Responsible public or private organization or company Charles University 3rd Medical Faculty

3. Location and postal address Ruská 87
100 00 Prague 10
Czech Republic

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

On contract with the National Institute of Public Health

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

The kind of work cannot be classified according to the 1983 WHO

6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Aflatoxin B1 in vivo, potential prevention and modification relationship to carcinogenic activity

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1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 2 (i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

~~Yes~~/[✓ No]

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes/[✓ No]

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (iii)

National biological defence research and development programme

Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

2. Where is it located (include both address and geographical location)?

3. Floor area of laboratory areas by containment level:

BL2 ______________________________ (sqM)

BL3 ______________________________ (sqM)

BL4 ______________________________ (sqM)

Total laboratory floor area ______________________________ (sqM)

4. The organizational structure of each facility.

(i) Total number of personnel ____________________

(ii) Division of personnel:

Military ____________________

Civilian ____________________

(iii) Division of personnel by category:

Scientists ____________________

Engineers ____________________

Technicians ____________________

Administrative and support staff ____________________

(iv) List the scientific disciplines represented in the scientific/engineering staff.

(v) Are contractor staff working in the facility? If so, provide an approximate number.

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

(vii) What are the funding levels for the following programme areas:

Research ____________________

Development ____________________

Test and evaluation ____________________

(viii) Briefly describe the publication policy of the facility:

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

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* Including viruses and prions.

Form B (i)

Background information on outbreaks of reportable infectious diseases

Disease		Number of cases per year			
	1996	1997	1998	1999	2000
Salmonelosis	8.650	6.965	8.230	7.302	
Shigelosis	245	210	260	251	
Viral Hepatitis A	1.620	1.187	886	898	

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1. Time of cognizance of the outbreak ....No report..........
2. Location and approximate area affected ....
3. Type of disease/intoxication ....
4. Suspected source of disease/ intoxication ....
5. Possible causative agent(s) ....
6. Main characteristics of systems ....
7. Detailed symptoms, when applicable
   - respiratory ....
   - circulatory ....
   - neurological/behavioural ....
   - intestinal ....
   - dermatological ....
   - nephrological ....
   - other ....
8. Deviation(s) from the normal pattern as regards
   - type ....
   - development ....
   - place of occurrence ....
   - time of occurrence ....
   - symptoms ....
   - virulence pattern ....

- drug resistance pattern ....
- agent(s) difficult to diagnose ....
- presence of unusual vectors ....
- other ....

9. Approximate number of primary cases ....
10. Approximate number of total cases ....
11. Number of deaths ....
12. Development of the outbreak ....
13. Measures taken ....

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. 16th Pečenka's Epidemiological days
- arranging organization(s), etc. Society for epidemiology and microbiology JEP
- time 25.-27. October 1999
- place Benešov
- main subject(s) for the conference, etc.
- conditions for participation
- point of contact for further information, registration, etc.

2. Information regarding other opportunities

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. Hygiene and Epidemiology for the next milenium ....
- arranging organization(s), etc. Regional Hygiene Station Brno ....
- time 24.-25. February 2000 ....
- place Brno ....
- main subject(s) for the conference, etc. ....

  ....
- conditions for participation ....

  ....
- point of contact for further information, registration, etc. ....

  ....

  ....

2. Information regarding other opportunities

....

....

....

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures	Amended since last year
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES/NO	YES/NO	YES/NO	~~YES~~/[✓ NO]
(b) Exports of micro-organisms* and toxins	YES/NO	YES/NO	YES/NO	~~YES~~/[✓ NO]
(c) Imports of micro-organisms* and toxins	YES/NO	YES/NO	YES/NO	YES/[✓ NO]

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* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party.

2. Past offensive biological research and development programmes:

   - ~~YES~~ - [✓ NO]

   - Period(s) of activities

   - Summary of the research and development activities indicating whether work was performed concerning production, tert and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.

3. Past defensive biological research and development programmes:

   - ~~YES~~ - [✓ NO]

   - Period(s) of activities

   - Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

Form G

Declaration of vaccine production facilities

1. Name of facility:

2. Location (mailing address):

3. General description of the types of diseases covered:

TI: Microbiology of food and animal feeding stuffs [illegible] enumeration of Clostridium perfringens [illegible]
SO: Czech-Republic-Standard [illegible]
PY: 1999

[illegible]

TI: Ecosystems modelling: a commentary [illegible]
AU: Straskraba-M; Jorgensen-SE; Patten-BC
SO: Ecological-Modelling (Ecol.-Model.) [illegible]
PY: 1999

[illegible]

TI: Biology and distribution of [illegible] aphid parasitoids (Hym., Braconidae, Aphidiinae) [illegible]
AU: Stary-P
SO: Journal-of-Applied-Entomology [illegible]
ISN: [illegible]
PY: 1999

[illegible]

TI: Microbiology of food and animal feeding stuffs [illegible] enumeration of Clostridium perfringens [illegible]
SO: Czech-Standard: CSN ISO [illegible]
PY: 1999

[illegible]

TI: Fungal utilization of organophosphate pesticides and their degradation by Aspergillus flavus and A. sydowii in soil
AU: Hasan-HA
SO: Folia-Microbiol-(Praha). Vol 44, No 1, 1999, 77-84.
PY: 1999

[illegible]

TI: PCR method for generating multiple mutations at adjacent sites
AU: Adamec-J; Kalousek-F
SO: Folia-Microbiol-(Praha). Vol 44 [illegible] 1999 [illegible]
PY: 1999

[illegible]

TI: Extracellular oxidative enzyme production and PAH removal [illegible] exploratory mycelium of white rot fungi
AU: Novotny-C; Erbanova-P; Sasek-V; Kubatova-A; Cajthaml-T; Lang-E; Krahl-J; Zadrazil-F
SO: Biodegradation. Vol 10, No 3, 1999, [illegible]
PY: 1999

[illegible]

TI: [illegible]
AU: [illegible]
SO: Postgrad-Med; [illegible] Spec No, 1999, [illegible]

9 of 17
Marked in Search: #22
TI: Biological activities of oligoketide pigments of Monascus purpureus
AU: Martinkova-L; Patakova-Juzlova-P; Kren-V; Kucerova-Z; Havlicek-V; Olsovsky-P; Hovorka-O; Rihova-B; Vesely-D; Vesela-D; Ulrichova-J; Prikrylova-V
SO: Food-Additives-and-Contaminants. 16 (1) 15-24, 1999.
PY: 1999

10 of 17
Marked in Search: #22
TI: The Conserved Lysine 860 in the Additional Fatty-acylation Site of Bordetella pertussis Adenylate Cyclase Is Crucial for Toxin Function Independently of Its Acylation Status
AU: Basar-T; Havlicek-V; Bezouskova-S; Halada-P; Hackett-M; Sebo-P
SO: Journal-of-Biological-Chemistry (J.-Biol.-Chem.) vol. 274, no. 16, pp. 10777-10783, 1999
PY: 1999

11 of 17
Marked in Search: #22
TI: Modulation of mouse lymphocyte responsiveness by the saliva of Rhodnius prolixus (Hemiptera: Reduviidae)
AU: Kalvachova-P; Hribalova-V; Kodym-P; Volf-P
SO: J-Med-Entomol; VOL 36, ISS 3, 1999, P341-4
PY: 1999

12 of 17
Marked in Search: #22
TI: Evaluation of a microplate latex agglutination method (Verotox-F assay) for detecting and characterizing verotoxins (Shiga toxins) in Escherichia coli
AU: Karmali-MA; Petric-M; Bielaszewska-M
SO: Journal-of-Clinical-Microbiology (J.-Clin.-Microbiol.) vol. 37, no. 2, pp. 396-399, 1999
PY: 1999

13 of 17
Marked in Search: #22
TI: The conserved lysine 860 in the additional fatty-acylation site of Bordetella pertussis adenylate cyclase is crucial for toxin function independently of its acylation status.
AU: Basar-T; Havlicek-V; Bezouskova-S; Halada-P; Hackett-M; Sebo-P
SO: J-Biol-Chem; VOL 274, ISS 16, 1999, P10777-83
PY: 1999

14 of 17
Marked in Search: #22
TI: Inactivation of microorganisms in a flow-through photoreactor with an immobilized TiO_2 layer
AU: Belhacova-L; Krysa-J; Geryk-J; Jirkovsky-J
SO: Journal-of-Chemical-Technology-and-Biotechnology. 74 (2) 149-154, 1999
PY: 1999

15 of 17
Marked in Search: #22
TI: Evaluation of a microplate latex agglutination method (Verotox-F assay) for detecting and characterizing verotoxins (Shiga toxins) in Escherichia coli
AU: Karmali-MA; Petric-M; Bielaszewska-M
SO: Journal-of-Clinical-Microbiology. 37 (2) 396-399, 1999.
PY: 1999

16 of 17
Marked in Search: #22
TI: The effect of different solvents on the ATP/ADP content and growth properties of HeLa cells.
AU: Forman-S; Kas-J; Fini-F; Steinberg-M; Ruml-T
SO: J-Biochem-Mol-Toxicol; VOL 13, ISS 1, 1999, P11-5
PY: 1999

17 of 17
Marked in Search: #22
TI: Toxicity of chromium to activated sludge.
AU: Vankova-S; Kupec-J; Hoffmann-J
SO: Ecotoxicol-Environ-Saf; VOL 42, ISS 1, 1999, P16-21
PY: 1999

1 of 58 Bibliographic Information
[illegible]
Expression of the Csp protein family upon cold shock and production of tetracycline in Streptomyces aureofaciens.
Mikulik K; Khanh-Hoang Q; Halada P; Bezouskova S; Benada O; Behal V
Institute of Microbiology, Academy of Sciences of the Czech Republic, Videnska 1083, Prague, 4, 142 20, Czech Republic. mikulik@biomed.cas.cz
Biochem Biophys Res Commun (UNITED STATES) Nov 19 1999 265 (2) p305-10
ISSN: 0006-291X
Language: ENGLISH
Document Type: JOURNAL ARTICLE

2 of 58 Bibliographic Information
[illegible]
Stereoisomers of 4-fluoroglutamic acid: influence on Escherichia coli glutamate decarboxylase.
[illegible] J; Netopilova M; Tolman V
Department of Biochemical Sciences, Charles University Prague, Faculty of Pharmacy, Hradec Kralove, Czech Republic.
Pharmazie (GERMANY) Sep 1999 54 (9) p712-4 ISSN: 0031-7144
Language: ENGLISH
Document Type: JOURNAL ARTICLE

3 of 58 Bibliographic Information
[illegible]
Bioassay-directed chemical analysis and detection of mutagenicity in ambient air of the coke oven.
Dobias L; Kusova J; Gajdos O; Vidova P; Gajdosova D; Havrankova J; Fried M; Binkova B; Topinka J
Department of Genetic Toxicology, Regional Institute of Hygiene, Ostrava, Czech Republic.
Mutat Res (NETHERLANDS) Sep 30 1999 445 (2) p285-93 ISSN: 0027-5107
Language: ENGLISH
Document Type: JOURNAL ARTICLE

4 of 58 Bibliographic Information
20044038
Antimeningococcal herd immunity in the Czech Republic--influence of an emerging clone, Neisseria meningitidis ET-15/37.
Kriz P; Kriz B; Svandova E; Musilek M
National Reference Laboratory for Meningococcal Infections, National Institute of Public Health, Prague, Czech Republic.
Epidemiol Infect (ENGLAND) Oct 1999 123 (2) p193-200 ISSN: 0950-2688
Language: ENGLISH
Document Type: JOURNAL ARTICLE

5 of 58 Bibliographic Information
99448906
Standardisation of restriction fragment length polymorphism analysis for Mycobacterium avium subspecies paratuberculosis.
Pavlik I; Horvathova A; Dvorska L; Bartl J; Svastova P; du Maine R; Rychlik I
Veterinary Research Institute, Brno, Czech Republic. pavlik@vri.cz
J Microbiol Methods (NETHERLANDS) Oct 1999 38 (1-2) p155-67 ISSN: 0167-7012
Language: ENGLISH
Document Type: JOURNAL ARTICLE

6 of 58 Bibliographic Information
[illegible]
Novel sensitive high-performance liquid chromatographic method for assay of coumarin 7-hydroxylation.
Soucek P
Biotransformations Group, Center of Occupational Diseases, National Institute of Public Health, Prague, Czech Republic. pavel.soucek@szu.cz
J Chromatogr B Biomed Sci Appl (NETHERLANDS) Oct 29 1999, 734 (1) p23-9
ISSN: 1387-2273
Language: ENGLISH
Document Type: JOURNAL ARTICLE

7 of 58 Bibliographic Information
[illegible]
[Chlamydiae--still new surprises]
Chlamydie--stale nova prekvapeni.
Pospisil L
Vyzkumny ustav veterinarniho lekarstvi, Brno.
Cas Lek Cesk (CZECH REPUBLIC) Aug 2 1999, 138 ([illegible]) p[illegible] ISSN: [illegible]
Language: CZECH
Document Type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL
English Abstract

8 of 58 Bibliographic Information
[illegible]
[Reservoirs, interactions and stability of genetic resistance to antibiotics. The "easy to get--hard to lose" syndrome]
Rezervoary, interakcie a stabilita genov rezistencie na antibiotika. Syndrom "easy to get--hard to lose".
Blahova J; Kralikova K; Krcmery V
Ustav preventivnej a klinickej mediciny, Bratislava.
Cas Lek Cesk (CZECH REPUBLIC) Jul 12 1999, 138 (14) p424-8, ISSN: 0008-7335
Language: SLOVAK
Document Type: JOURNAL ARTICLE English Abstract

9 of 58 Bibliographic Information
[illegible]
[Peptic ulcer and Helicobacter pylori, diagnosis and therapy]
Peptický vred a Helicobacter pylori, jak je diagnostikovat a lecit.
Fixa B; Komarkova O
II. katedra internich obor ANG u LF UK, Hradec Králové.
Cas Lek Cesk (CZECH REPUBLIC) Jun 7 1999, 138 (12) p355-8, ISSN: 0008-7335
Language: CZECH
Document Type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL
English Abstract

10 of 58 Bibliographic Information
[illegible]
[Liberation of drugs from impregnated wound dressings]
Liberacia lieciv z impregnovanych krytov na rany.
[illegible]
Katedra galenickej farmacie Farmaceutickej fakulty Univerzity Komenskeho, Bratislava.
Ceska Slov Farm (CZECH REPUBLIC) Sep 1999, 48 (5) p221-5, ISSN: 1210-7816
Language: SLOVAK
Document Type: JOURNAL ARTICLE English Abstract

11 of 58 Bibliographic Information
20023928
Purification and characterization of the lysozyme from the gut of the soft tick Ornithodoros moubata.
Kopacek P; Vogt R; Jindrak L; Weise C; Safarik I
Institute of Parasitology of the Czech Academy of Sciences, Ceske Budejovice, Czech Republic. kopajz@paru.cas.cz
Insect Biochem Mol Biol (ENGLAND) Nov 1999, 29 (11) p989-97, ISSN 0965-1748
Language: ENGLISH
Document Type: JOURNAL ARTICLE

12 of 58 Bibliographic Information
20007769
In vivo induction of CTL responses by recombinant adenylate cyclase of Bordetella pertussis carrying multiple copies of a viral CD8(+) T-cell epitope.
Sebo P; Moukrim Z; Kalhous M; Schaft N; Dadaglio G; Sheshko V; Fayolle C; Leclerc C
Cell and Molecular Microbiology Division, Institute of Microbiology of the Czech Academy of Sciences, Videnska 1083, CZ-142 20, Prague, Czech Republic. sebo@biomed.cas.cz
FEMS Immunol Med Microbiol (NETHERLANDS) Nov 1999, 26 (2) p167-73, ISSN 0928-8244
Language: ENGLISH
Document Type: JOURNAL ARTICLE

13 of 58 Bibliographic Information
20025100
Correlations and anticorrelations among nucleotide distributions along the genomes of various organisms.
Haring D; Kypr J
Institute of Biophysics, Academy of Sciences of the Czech Republic, Brno.
J Biomol Struct Dyn (UNITED STATES) Oct 1999, 17 (2) p267-73, ISSN 0739-1102
Language: ENGLISH
Document Type: JOURNAL ARTICLE

14 of 58 Bibliographic Information
99441215
Heterobifunctional photoaffinity probes for cytochrome P450 2B.
Antonovic L; Hodek P; Smrcek S; Novak P; Sulc M; Strobel HW
Department of Biochemistry, Department of Organic Chemistry, Charles University, Hlavova 2030, Praha 2, CZ-128 40, Czech Republic.
Arch Biochem Biophys (UNITED STATES) Oct 15 1999, 370 (2) p208-15, ISSN 0003-9861
Language: ENGLISH
Document Type: JOURNAL ARTICLE

15 of 58 Bibliographic Information
99441213
Expression of cytochrome P450 2A6 in Escherichia coli: purification, spectral and catalytic characterization, and preparation of polyclonal antibodies.
Soucek P
Center of Occupational Diseases, National Institute of Public Health, Srobarova 48, Praha 10, 100 42, Czech Republic. pavel.soucek@ech.cz

Arch Biochem Biophys (UNITED STATES) Oct 15 1999, [illegible] (2) p140-[illegible] ISSN 0003-9861
Language: ENGLISH
Document Type: JOURNAL ARTICLE

16 of 58 Bibliographic Information
20021224
Effect of low and high temperatures on infectivity of Encephalitozoon cuniculi spores suspended in water.
Koudela B; Kucerova S; Hudcovic T
Institute of Parasitology, Academy of Sciences of the Czech Republic, Hudcovice, Czech Republic. koudela@paru.cas.cz
Folia Parasitol (Praha) (CZECH REPUBLIC) 1999, 46 (3) p171-4, ISSN: 0015-5683
Language: ENGLISH
Document Type: JOURNAL ARTICLE

17 of 58 Bibliographic Information
[illegible]
Characterization of chlorobenzoate degraders isolated from polychlorinated biphenyl-contaminated soil and sediment in the Czech Republic.
Pavlu L; Vosahlova J; Klierova H; Prouza M; Demnerova K; Brenner V
Institute of Microbiology, Academy of Sciences of the Czech Republic, Prague.
J Appl Microbiol (ENGLAND) Sep 1999, 87 (3) p381-6, ISSN: 1364-5072
Language: ENGLISH
Document Type: JOURNAL ARTICLE

18 of 58 Bibliographic Information
99457752
[Elastase activity of gram-negative non-fermenting bacteria and two variations of a simple method for their detection]
Elastazova aktivita gramnegativnich nefermentujicich bakterii a dve varianty jednoduche metody jejiho pr ANG ukazu
Ondrovcik P; Svoboda J; Woznicova V
Mikrobiologicky ustav, Lekarska fakulta Masarykovy univerzity a Fakultni nemocnice u sv. Anny, Brno.
Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Aug 1999, 48 (3) p117-21, ISSN: 1210-7913
Language: CZECH
Document Type: JOURNAL ARTICLE; English Abstract

19 of 58 Bibliographic Information
[illegible]
[Properties of Salmonella isolates in the Czech Republic]
Vlastnosti salmonelovych izolat ANG u v Ceske republice.
Bramova H; Karpiskova R; Dedicova D; Sisak F; Rychlik I
Statni zdravotni ustav, Praha.
Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Aug 1999, 48 (3) p111-6, ISSN: 1210-7913
Language: CZECH
Document Type: JOURNAL ARTICLE; English Abstract

20 of 58 Bibliographic Information
[illegible]
The isolation of certain pathogen microorganisms from raw milk.
Uraz G; Yucel N

Department of [illegible], Faculty of [illegible], University of [illegible], [illegible]
Cent Eur J Public Health (CZECH REPUBLIC) Aug 1999, 7 (3) p[illegible], ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

[illegible] of 18 (Bibliographic Information)
[illegible]
Epidemiological analysis of Pseudomonas aeruginosa strains isolated from a selected patient population in Brno, Czech Republic.
[illegible]; Kolarova M; [illegible]; Zajicova V; Burgetova D; [illegible]; [illegible]
Department of Epidemiology of Infectious Diseases, Faculty of Medicine, Masaryk University, Brno, Czech Republic.
Cent Eur J Public Health (CZECH REPUBLIC) Aug 1999, 7 (3) p[illegible], ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

[illegible] of 18 (Bibliographic Information)
[illegible]
The antimicrobial efficiency of Piper betle Linn leaf (stalk) against human pathogenic bacteria and phytopathogenic fungi.
[illegible]; Pandit V; Mehta BK
School of Studies in Chemistry, Vikram University, Ujjain, India.
Cent Eur J Public Health (CZECH REPUBLIC) Aug 1999, 7 (3) p[illegible], ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

[illegible] of 18 (Bibliographic Information)
[illegible]
Reduction of microorganisms in sewage effluent using hypochlorite and peracetic acid as disinfectants.
Bonadonna L; Della Libera S; Veschetti E; Cutilli D; Ottaviani M; Divizia M; [illegible]; Gabrieli R; Pana A; Martini C; [illegible]
Laboratory of Environmental Hygiene, Institute of Public Health, Rome, Italy.
Cent Eur J Public Health (CZECH REPUBLIC) Aug 1999, 7 (3) p[illegible], ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

14 of 18 (Bibliographic Information)
[illegible]
Present state of tuberculosis in the Czech Republic and in Central European and Baltic countries.
Kubin M; [illegible]; Havelkova M; Svandova E; [illegible]; [illegible]; [illegible]
National Institute of Public Health, Prague, Czech Republic.
Cent Eur J Public Health (CZECH REPUBLIC) Aug 1999, 7 (3) p[illegible], ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

[illegible] of 18 (Bibliographic Information)
[illegible]

Expression [illegible]
[illegible]
[illegible]
Laboratory of [illegible] Molecular [illegible], Faculty of Science, Masaryk University, [illegible], Czech Republic.
[illegible] (UNITED STATES) [illegible] ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

26 of 58: Bibliographic Information
[illegible]
Analysis of the [illegible] promoter.
[illegible]
Institute of Microbiology, Academy of Sciences of the Czech Republic, [illegible] Praha 4, Czech Republic.
[illegible] (UNITED STATES) [illegible] ISSN [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

27 of 58: Bibliographic Information
[illegible]
[illegible]
[illegible]
[illegible]
Department of Epidemiology of Infectious Diseases, Faculty of Medicine, Masaryk University, Brno, Czech Republic.
Folia Microbiol (Praha) (CZECH REPUBLIC) 1999, 44 [illegible] ISSN 0015-5632
Language: ENGLISH
Document Type: JOURNAL ARTICLE

28 of 58: Bibliographic Information
99419542
Alkaline phosphatase [illegible] during sporulation of Bacillus [illegible]
[illegible] M, Nemec M
Department of Microbiology, Faculty of Science, Masaryk University, Brno, Czech Republic. [illegible]
Folia Microbiol (Praha) (CZECH REPUBLIC) 1999, 44 [illegible] ISSN 0015-5632
Language: ENGLISH
Document Type: JOURNAL ARTICLE

29 of 58: Bibliographic Information
99419541
Assignment of [illegible] functions to specific [illegible] of a [illegible]
[illegible]
Department of [illegible], Middle East Technical University, Ankara, Turkey.
Folia Microbiol (Praha) (CZECH REPUBLIC) 1999, 44 [illegible] ISSN 0015-5632
Language: ENGLISH
Document Type: JOURNAL ARTICLE

10 of 18 Bibliographic Information
[illegible]
Chromium-resistant bacteria isolated from industrial effluents and their use in detoxication of hexavalent chromium.
Shakoori AR; Tahseen S; Haq RU
Department of Zoology, University of the Punjab, Lahore, Pakistan. [illegible]
Folia Microbiol (Praha) (CZECH REPUBLIC) 1999, 44 (1) p50-4 ISSN: 0015-5632
Language: ENGLISH
Document Type: JOURNAL ARTICLE

11 of 18 Bibliographic Information
[illegible]
Occurrence of Enterococcus spp. in waters.
Svec P; Sedlacek I
Czech Collection of Microorganisms, Masaryk University, Brno, Czech Republic. [illegible]
Folia Microbiol (Praha) (CZECH REPUBLIC) 1999, 44 (1) p3-10 ISSN: 0015-5632
Language: ENGLISH
Document Type: JOURNAL ARTICLE

12 of 18 Bibliographic Information
[illegible]
A simple method for the isolation and purification of L-asparaginase from Enterobacter aerogenes.
Mukherjee J; Joeris K; Riechel P; Scheper T
Institut fur Technische Chemie der Universitat Hannover, Germany.
Folia Microbiol (Praha) (CZECH REPUBLIC) 1999, 44 (1) p15-8 ISSN: 0015-5632
Language: ENGLISH
Document Type: JOURNAL ARTICLE

13 of 18 Bibliographic Information
[illegible]
[Successful modification of human intestinal microflora with oral administration of lactic acid bacteria]
Prospesna modifikacia crevnej mikroflory cloveka peroralne podavanymi bakteriami mliecneho kysnutia.
Ferencik M; Ebringer L; Mikes Z; Jahnova E; Ciznar I
Institute of Immunology, Faculty of Medicine, Comenius University, Bratislava. ferencik@fmed.uniba.sk
Bratisl Lek Listy (SLOVAKIA) May 1999, 100 (5) p238-45 ISSN: 0006-9248
Language: SLOVAK
Document Type: CLINICAL TRIAL; JOURNAL ARTICLE; RANDOMIZED CONTROLLED TRIAL
English Abstract

14 of 18 Bibliographic Information
[illegible]
Development of bacterial resistance to the third generation cephalosporins and their clinical use.
Kolar M; Latal T; Hajek V
Department of Microbiology, Faculty of Medicine, Palacky University, Olomouc, Czech Republic. kolar@[illegible]
J Chemother (ITALY) Aug 1999, 11 (4) p260-3 ISSN: 1120-009X

35 of 58 Bibliographic Information
99409758
Incidence of Borrelia garinii and Borrelia afzelii in Ixodes ricinus ticks in an urban environment, Prague, Czech Republic, between 1995 and 1998.
Basta J; Plch J; Hulinska D; Daniel M
National Institute of Public Health, Centre of Epidemiology and Microbiology, Prague, Czech Republic.
Eur J Clin Microbiol Infect Dis (GERMANY) Jul 1999, 18 (7) p515-7, ISSN 0934-9723
Language: ENGLISH
Document Type: JOURNAL ARTICLE

36 of 58 Bibliographic Information
99366508
[Antibacterial peptides isolated from the urine of healthy adults]
Antibakterialne peptidy izolovane z mocu zdravych ludi
Adam J; Chavkova Z; Burzin J; Iraga R
Institute of Medical Chemistry and Biochemistry, Faculty of Medicine, Safarikiensis University, Kosice, Slovakia.
Bratisl Lek Listy (SLOVAKIA) Mar 1999, 100 (3) p[illegible], ISSN 0006-9248
Language: SLOVAK
Document Type: JOURNAL ARTICLE English Abstract

37 of 58 Bibliographic Information
99393344
Kinetic analysis of substrate inhibition in nitric oxide reductase of Paracoccus denitrificans.
Koutny M; Kucera I
Department of Biochemistry, Masaryk University, Kotlarska 2, Brno, CZ-61137, Czech Republic.
Biochem Biophys Res Commun (UNITED STATES) Aug 27 1999, 262 (2) p562-4, ISSN 0006-291X
Language: ENGLISH
Document Type: JOURNAL ARTICLE

38 of 58 Bibliographic Information
99411233
Evaluation of selective media for bifidobacteria in poultry and rabbit caecal samples.
Rada V; Sirotek K; Petr J
Department of Microbiology and Biotechnology, Czech University of Agriculture, Prague, Czech Republic.
Zentralbl Veterinarmed [B] (GERMANY) Aug 1999, 46 (6) p369-73, ISSN 0931-1793
Language: ENGLISH
Document Type: JOURNAL ARTICLE

39 of 58 Bibliographic Information
99211636
Use of rifampicin in T7 RNA polymerase-driven expression of a plant enzyme: rifampicin improves yield and assembly.
Kuderova A; Nanak E; Truksa M; Brzobohaty B
Faculty of Science, Masaryk University, Kotlarska 2, Brno, 611 37, Czech

Republic.
Protein Expr Purif (UNITED STATES) Aug 1999 16 (3) p405-9 ISSN: 1046-5928
Language: ENGLISH
Document Type: JOURNAL ARTICLE

40 of 58 Bibliographic Information
99396492
Persistence of Borrelia garinii and Borrelia afzelii in patients with lyme arthritis.
Hulinska D; Votypka J; Valesova M
National Institute of Public Health, Prague, Czech Republic.
Zentralbl Bakteriol (GERMANY) Jul 1999 289 (3) p301-18 ISSN: 0934-8840
Language: ENGLISH
Document Type: JOURNAL ARTICLE

41 of 58 Bibliographic Information
99398366
Chromogranin A-, somatostatin- and serotonin- containing endocrine cells in the corporal gastric mucosa of patients with Helicobacter pylori associated chronic gastritis.
Tzaneva M; Julianov A
Department of Pathology, Medical Faculty, Thracian University, Stara Zagora 6003, Bulgaria.
Endocr Regul (CZECH REPUBLIC) Jun 1999 33 (2) p79-82 ISSN: 1210-0668
Language: ENGLISH
Document Type: CLINICAL TRIAL; JOURNAL ARTICLE

42 of 58 Bibliographic Information
99348704
Salivary gland extract from Ixodes ricinus ticks inhibits production of interferon-gamma by the upregulation of interleukin-10.
Kopecky J; Kuthejlova M; Pechova J
Institute of Parasitology, Academy of Sciences of the Czech Republic, and Faculty of Biology, University of South Bohemia, Branisovska 31, 37005 Ceske Budejovice, Czech Republic.
Parasite Immunol (ENGLAND) Jul 1999 21 (7) p351-6 ISSN: 0141-9838
Language: ENGLISH
Document Type: JOURNAL ARTICLE

43 of 58 Bibliographic Information
99354481
Complex genomic and phenotypic characterization of the related species Staphylococcus carnosus and Staphylococcus piscifermentans.
Pantucek R; Sedlacek I; Doskar J; Rosypal S
Department of Genetics and Molecular Biology, Faculty of Science, Masaryk University, Brno, Czech Republic. rosypal@sci.muni.cz
Int J Syst Bacteriol (UNITED STATES) Jul 1999 49 Pt 3 p941-51 ISSN: 0020-7713
Language: ENGLISH
Document Type: JOURNAL ARTICLE

44 of 58 Bibliographic Information
99354473
Lectin-like sequences in genome of Borrelia burgdorferi.
Rudenko N; Golovchenko M; Grubhoffer L
Faculty of Biological Sciences, University of South Bohemia, Czech Republic.

[illegible] (CZECH REPUBLIC) [illegible] 1999 [illegible] ISSN: [illegible]
Language: ENGLISH
Document Type: JOURNAL ARTICLE

45 of 58 Bibliographic Information
[illegible]
[Antibiotic resistance]
Niektore problemy rezistencie na antibiotika
Blahova J, Kralikova K, Krcmery V
Ustav preventivnej a klinickej mediciny, Bratislava.
Cas Lek Cesk (CZECH REPUBLIC) May 24 1999, 138 (11) p333-7, ISSN: 0008-7335
Language: SLOVAK
Document Type: JOURNAL ARTICLE; English Abstract

46 of 58 Bibliographic Information
[illegible]
[illegible]
[illegible]
[illegible] Mrazek [illegible]
[illegible]
Cas Lek Cesk (CZECH REPUBLIC) May 24 1999, 138 (11) p330-[illegible] ISSN: 0008-7335
Language: CZECH
Document Type: JOURNAL ARTICLE; English Abstract

47 of 58 Bibliographic Information
[illegible]
Cytokines, intestine, and bacteria [comment]
Palicka V
Institute of Clinical Chemistry and Diagnostics, Charles University, University Hospital, Hradec Kralove, Czech Republic [illegible]
Nutrition (UNITED STATES) Jun 1999, 15 (6) p430, ISSN: 0899-9007
Note: Comment on: Nutrition 1999 Jun;15(6):427-9
Language: ENGLISH
Document Type: COMMENT; JOURNAL ARTICLE

48 of 58 Bibliographic Information
[illegible]
Treatment of chronic osteomyelitis of the lower extremity using free flap transfer
Tvrdek M, Nejedly A, Kletensky J, Kufa R
Department of Plastic Surgery, Third Medical Faculty, Charles University, Prague, Czech Republic
Acta Chir Plast (CZECH REPUBLIC) 1999, 41 (2) p46-9, ISSN: 0001-5423
Language: ENGLISH
Document Type: JOURNAL ARTICLE

49 of 58 Bibliographic Information
[illegible]
Existence of uncoupling protein-2 antigen in isolated mitochondria from various tissues
Jezek P, Zackova M, [illegible] Ruzicka M, Borecky J, [illegible] [illegible] Garlid KD, Gimeno RE, Tartaglia LA
Department of Membrane Transport Biophysics, Institute of Physiology, Prague, Czech Republic. jezek@sun1.biomed.cas.cz

FEBS Lett (NETHERLANDS) Jul 16 1999 455 (1-2) p79-82 ISSN: 0014-5793
Contract/Grant No.: GM31086--GM--NIGMS
Language: ENGLISH
Document Type: JOURNAL ARTICLE

50 of 58 Bibliographic Information
99263345
Crystallization and preliminary X-ray diffraction analysis of haloalkane dehalogenase LinB from Sphingomonas paucimobilis UT26.
Smatanova I; Nagata Y; Svensson LA; Takagi M; Marek J
Laboratory of Biomolecular Structure and Dynamics and Department of Inorganic Chemistry, Faculty of Science, Masaryk University, Kotlarska 2, CZ 611 37 Brno, Czech Republic.
Acta Crystallogr D Biol Crystallogr (DENMARK) Jun 1999 55 (Pt 6) p1231-3
ISSN: 0907-4449
Language: ENGLISH
Document Type: JOURNAL ARTICLE

51 of 58 Bibliographic Information
99182982
Microevolution through DNA exchange among strains of Neisseria meningitidis isolated during an outbreak in the Czech Republic.
Kriz P; Giorgini D; Musilek M; Larribe M; Taha MK
National Reference Laboratory for Meningococcal Infections, NIPH, Prague, Czech Republic.
Res Microbiol (FRANCE) May 1999 150 (4) p273-80 ISSN: 0923-2508
Language: ENGLISH
Document Type: JOURNAL ARTICLE

52 of 58 Bibliographic Information
99335564
A multidrug-resistant tuberculosis microepidemic caused by genetically closely related Mycobacterium tuberculosis strains.
Kubin M; Havelkova M; Hyncicova I; Svecova Z; Kaustova J; Kremer K; van Soolingen D
National Institute of Public Health, Prague, Czech Republic.
kubin@toaster.szu.cz
J Clin Microbiol (UNITED STATES) Aug 1999 37 (8) p2715-6 ISSN: 0095-1137
Language: ENGLISH
Document Type: JOURNAL ARTICLE

53 of 58 Bibliographic Information
99327501
Mosaic pattern of Borrelia infection in a continuous population of the tick Ixodes ricinus (Acari: Ixodidae).
Zeman P; Daniel M
Regional Center of Hygiene, Prague, Czech Republic. petr.zeman@mzcr.cz
Exp Appl Acarol (NETHERLANDS) Apr 1999 23 (4) p327-35 ISSN: 0168-8162
Language: ENGLISH
Document Type: JOURNAL ARTICLE

54 of 58 Bibliographic Information
99317490
Shiga toxin-producing Escherichia coli O157 in feedlot cattle and Norwegian rats from a large-scale farm.
Cizek A; Alexa P; Literak I; Hamrik J; Novak P; Smola J

Faculty of Veterinary Medicine, University of Veterinary and Pharmaceutical Sciences, Brno, Czech Republic. cizekal@post.cz
Lett Appl Microbiol (ENGLAND) Jun 1999 28 (6) p435-9 ISSN: 0266-8254
Language: ENGLISH
Document Type: JOURNAL ARTICLE

55 of 58 Bibliographic Information
99160327
Enhanced bioaccumulation of heavy metal ions by bacterial cells due to surface display of short metal binding peptides.
Kotrba P; Doleckova L; de Lorenzo V; Ruml T
Department of Biochemistry and Microbiology, Institute of Chemical Technology, 166 28 Prague, Czech Republic.
Appl Environ Microbiol (UNITED STATES) Mar 1999 65 (3) p1092-8 ISSN: 0099-2240
Language: ENGLISH
Document Type: JOURNAL ARTICLE

56 of 58 Bibliographic Information
99279416
[Sensitivity to blood bactericidal activity and hydrophobicity of Acinetobacter baumannii after treatment with imipenem]
Citlivost' na baktericidny ucinok sera a hydrofobicita Acinetobacter baumannii po ucinku imipenemu.
Hostacka A
Ustav preventivnej a klinickej mediciny, Bratislava.
Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Apr 1999 48 (2) p67-72
ISSN: 0009-5222
Language: SLOVAK
Document Type: JOURNAL ARTICLE English Abstract

57 of 58 Bibliographic Information
99279414
[An unusual isolation of Neisseria meningitidis]
Neobvykla izolacia Neisseria meningitidis.
Blahova M; Petrovicova A
Oddelenie klinickej mikrobiologie, NsP, Ziar nad Hronom.
Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Apr 1999 48 (2) p60-2 ISSN: 0009-5222
Language: SLOVAK
Document Type: JOURNAL ARTICLE English Abstract

58 of 58 Bibliographic Information
99279412
[A micro-epidemic of tuberculosis in the South Moravia Region]
Mikroepidemie tuberkulozy v Jihomoravskem kraji.
Kubin M; Havelkova M; Hyncicova I; Mezensky L; Sklenar V; Kremer K; van Soolingen D
Statni zdravotni ustav, Praha.
Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Apr 1999 48 (2) p47-51
ISSN: 0009-5222
Language: CZECH
Document Type: JOURNAL ARTICLE English Abstract

1 of 15 Bibliographic Information
99281657

Cancer departments as a source of resistant bacteria and fungi?
Krcmery V Jr
Department of Pharmacology, St. Elisabeth Cancer Institute, Bratislava, Slovak Republic.
Neoplasma (CZECH REPUBLIC) 1999 46 (1) p3-6 ISSN: 0028-2685
Language: ENGLISH
Document Type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

2 of 15 Bibliographic Information
99261926
A 13-year-old girl with hyperlipoproteinaemia type IIb and low plasma protein levels.
Stozicky F; Karvarovska J; Sykora J
Paediatric Clinic, Charles University Hospital, Plzen, Czech Republic.
Eur J Pediatr (GERMANY) May 1999 158 (5) p427-8 ISSN: 0340-6199
Language: ENGLISH
Document Type: JOURNAL ARTICLE

3 of 15 Bibliographic Information
[illegible]
Enhanced metallosorption of Escherichia coli cells due to surface display of beta- and alpha-domains of mammalian metallothionein as a fusion to LamB protein.
Kotrba P; Pospisil P; de Lorenzo V; Ruml T
Dept. of Biochemistry and Microbiology, ICT, Prague, Czech Republic.
J Recept Signal Transduct Res (UNITED STATES) Jan-Jul 1999 19 (1-4) p703-15 ISSN: 1079-9893
Language: ENGLISH
Document Type: JOURNAL ARTICLE

4 of 15 Bibliographic Information
[illegible]
Expression of eukaryotic plasma membrane transporter HUP1 from Chlorella kessleri in Escherichia coli.
Opekarova M; Robl I; Grassl R; Tanner W
Institute of Microbiology, Czech Academy of Sciences, Prague, Czech Republic. opekaro@biomed.cas.cz
FEMS Microbiol Lett (NETHERLANDS) May 1 1999 174 (1) p65-72 ISSN: 0378-1097
Language: ENGLISH
Document Type: JOURNAL ARTICLE

5 of 15 Bibliographic Information
[illegible]
Occurrence of spirochetes (Borrelia sp.) in the tick Ixodes ricinus in the urban environment (capital of Prague) between 1994-1997.
Plch J; Basta J
National Institute of Public Health, Prague, Czech Republic.
Zentralbl Bakteriol (GERMANY) Feb 1999 289 (1) p79-88 ISSN: 0934-8840
Language: ENGLISH
Document Type: JOURNAL ARTICLE

6 of 15 Bibliographic Information
[illegible]
Genotypic and phenotypic similarity of multiresistant Acinetobacter baumannii isolates in the Czech Republic.

Nemec A; Janda L; Melter O; Dijkshoorn L
National Institute of Public Health, Prague, Czech Republic.
J Med Microbiol (ENGLAND) Mar 1999 48 (3) p287-96 ISSN: 0022-2615
Language: ENGLISH
Document Type: JOURNAL ARTICLE

7 of 15 Bibliographic Information
99231783
Pseudoazurin mediates periplasmic electron flow in a mutant strain of Paracoccus denitrificans lacking cytochrome c550.
Koutny M; Kucera I; Tesarik R; Turanek J; Van Spanning RJ
Department of Biochemistry, Faculty of Science, Masaryk University, Brno, Czech Republic.
FEBS Lett (NETHERLANDS) Apr 1 1999 448 (1) p157-9 ISSN: 0014-5793
Language: ENGLISH
Document Type: JOURNAL ARTICLE

8 of 15 Bibliographic Information
99183769
Plesiomonas shigelloides and its serovars in animals in the Czech Republic-region Moravia.
Bardon J
National Veterinary Institute, Olomouc, Czech Republic.
Cent Eur J Public Health (CZECH REPUBLIC) Feb 1999 7 (1) p47-9 ISSN: 1210-7778
Language: ENGLISH
Document Type: JOURNAL ARTICLE

9 of 15 Bibliographic Information
99183763
Elimination of Yersinia enterocolitica by chlorine on fresh tomatoes.
Escudero ME; Velazquez L; DiGenaro MS; de Cortinez YM; de Guzman AM
Department of General Microbiology, Faculty of Chemistry, Biochemistry and Pharmacy, National University of San Luis, Chacabuco y Pedernera, Argentina.
Cent Eur J Public Health (CZECH REPUBLIC) Feb 1999 7 (1) p24-6 ISSN: 1210-7778
Language: ENGLISH
Document Type: JOURNAL ARTICLE

10 of 15 Bibliographic Information
99214144
The conserved lysine 860 in the additional fatty-acylation site of Bordetella pertussis adenylate cyclase is crucial for toxin function independently of its acylation status.
Basar T; Havlicek V; Bezouskova S; Halada P; Hackett M; Sebo P
Institute of Microbiology of the Academy of Sciences of the Czech Republic, Videnska 1083, CZ-142 20 Prague 4, Czech Republic.
J Biol Chem (UNITED STATES) Apr 16 1999 274 (16) p10777-83 ISSN: 0021-9258 Contract/Grant No.: R01 DK46440-06--DK--NIDDK
Language: ENGLISH
Document Type: JOURNAL ARTICLE

11 of 15 Bibliographic Information
99198737
Identification of the catalytic triad in the haloalkane dehalogenase from Sphingomonas paucimobilis UT26.

Hynkova K; Nagata Y; Takagi M; Damborsky J
Department of Environmental Chemistry and Ecotoxicology, Masaryk University, Brno, Czech Republic.
FEBS Lett (NETHERLANDS) Mar 5 1999, 446 (1) p177-81, ISSN 0014-5793
Language: ENGLISH
Document Type: JOURNAL ARTICLE

12 of 15 Bibliographic Information
99171417
Evaluation of relative contributions of two enzymes potentially able to metabolize hydrogen peroxide in Paracoccus denitrificans.
Koutny M; Kriz L; Kucera I; Pluhacek I
Department of Biochemistry, Faculty of Science, Masaryk University, Kotlarska 2, CZ-61137, Brno, Czech Republic.
Biochim Biophys Acta (NETHERLANDS) Jan 27 1999, 1410 (1) p1-6, ISSN 0006-3002
Language: ENGLISH
Document Type: JOURNAL ARTICLE

13 of 15 Bibliographic Information
99128017
Molecular phylogeny of phi29-like phages and their evolutionary relatedness to other protein-primed replicating phages and other phages hosted by gram-positive bacteria.
Pecenkova T; Paces V
Institute of Molecular Genetics, Academy of Sciences of the Czech Republic, Flemingovo 2, CZ-16637 Prague 6, Czech Republic.
J Mol Evol (UNITED STATES) Feb 1999, 48 (2) p197-208, ISSN 0022-2844
Language: ENGLISH
Document Type: JOURNAL ARTICLE

14 of 15 Bibliographic Information
99132807
Toxicity of chromium to activated sludge.
Vankova S; Kupec J; Hoffmann J
Faculty of Technology Zlin, Technical University Brno, Zlin, Czech Republic.
Ecotoxicol Environ Saf (UNITED STATES) Jan 1999, 42 (1) p16-21, ISSN 0147-6513
Language: ENGLISH
Document Type: JOURNAL ARTICLE

15 of 15 Bibliographic Information
99084934
Pkg2, a novel transmembrane protein Ser/Thr kinase of Streptomyces granaticolor.
Nadvornik R; Vomastek T; Janecek J; Technikova Z; Branny P
Cell and Molecular Microbiology Division, Institute of Microbiology, Czech Academy of Sciences, 142 20 Prague 4, Czech Republic.
J Bacteriol (UNITED STATES) Jan 1999, 181 (1) p15-23, ISSN 0021-9193
Language: ENGLISH
Document Type: JOURNAL ARTICLE

ESTONIA

14 April 2000

The Permanent Mission of the Republic of Estonia to the United Nations presents its compliments to the UN Department of Disarmament Affairs and, in accordance with the Final Document of the Third Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, has the honour to forward hereby the information regarding the confidence building measures.

Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A. part 1	___√___	______
A. part 2 (i)	___√___	______
A. part 2 (ii)	___√___	______
A. part 2 (iii)	___√___	______
B (i)	______	___√___
B (ii)	___√___	______
C	___√___	______
D	___√___	______
E	______	______
F	___√___	______
G	___√___	______

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures	Amended since last year
(a) Development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES	YES	NO	NO
(b) Exports of micro-organisms* and toxins	YES	YES	NO	**YES**
(c) Imports of micro-organisms* and toxins	YES	YES	NO	**YES**

---

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention

FINLAND

25 April 2000

The Permanent Mission of Finland to the United Nations presents its compliments to the Department for Disarmament Affairs of the United Nations and has the honour to transmit herewith the information requested in paragraph 3 of the General Assembly resolution 46/35A entitled "Third Review Conference of the Parties to the Convention of the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction".

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. **Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange**

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☐
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐	☐
B (ii)	☒	☐
C	☐	☒
D	☐	☐
E	☐	☒
F	☒	☐
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 10.4.2000

State Party to the Convention Finland

Form A - Part 1

Exchange of data on research centres and laboratories 1/

1. **Name(s) of facility** 2/ Animal virus laboratory

2. **Responsible public or private organisation company** Department of virology and Epidemiology
National Veterinary and Food Research Institute

3. **Location and postal address** PB 368, FIN-00231 Helsinki, Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Agriculture and Forestry

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^3)
No maximum containment units

6. If no maximum containment unit, indicate highest level of protection
BL-3, 20 m^2

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate

Diagnostics of animal viruses (e.g. SVD and pestivirus)

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A - Part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Department of Virology

2. Responsible public or private organisation company University of Helsinki

3. Location and postal address
Haartmaninkatu 3
FIN-00290 Helsinki
Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

University of Helsinki

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)
No maximum containment units.

6. If no maximum containment unit, indicate highest level of protection
BL-3, three individual laboratories within one unit, totally 50 m^2.

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate Growth and handling of hazardous viruses (HIV, HFRS, NE, spuma).

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A - Part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Security laboratory

2. Responsible public or private organisation company University of Tampere

3. Location and postal address
University of Tampere
Institute of Medical Technology
Lenkkeilijänkatu 6
FIN-33520 Tampere
Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Institute of Medical Technology, Europian Union

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)
No maximum containment units.

6. If no maximum containment unit, indicate highest level of protection
BL-3 63.5 m^2

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate Basic science concerning the immunological characteristics and effects of HIV-1 and SIV.

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A - Part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ biosafety unit

2. Responsible public or private organisation company
Department of Microbiology
Aurora Hospital

3. Location and postal address
Nordenskjöldinkatu 20
FIN-00250 Helsinki
Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

City of Helsinki (Central Microbiological Laboratory of Helsinki)

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)
No maximum containment units

6. If no maximum containment unit, indicate highest level of protection
BL-3, 120 m^2

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate
Diagnostics of hazardous microbes from patient samples (e.g. Mycobacteria)

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A.-Part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ ....

2. Responsible public or private organisation company Labsystems Oy

3. Location and postal address
Sorvaajankatu 20
FIN-00810 Helsinki
Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

-

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m²)

-

6. If no maximum containment unit, indicate highest level of protection

- (BL-2)

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate

Labsystems Oy no longer has maximum containment units, they only grow microbes in class 2 pathogenicity (C.pneumonia, C.trachomatis, Toxoplasma gondii and CMV).

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A - Part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ HIV-laboratory

2. Responsible public or private organisation company National Public Health Institute

3. Location and postal address
Mannerheimintie 166
FIN-00300 Helsinki
Finland

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Health and Social Affairs

5. Number of maximum containment units 3/ within the research centre and/or laboratory with an indication of their respective size (m^2)
No maximum containment units.

6. If no maximum containment unit, indicate highest level of protection
BL-3, 140 m^2

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate
Basic research of HCV, HIV and other retroviruses.

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form B (i)

Background information on outbreaks of reportable infectious diseases

Number of cases per year

Disease	1996	1997	1998*	1999**	
tularemia	397	109	117	87	
anthrax	0	0	0	0	
diphteria	3	0	0	0	
febris typhoides	3	3	3	8	
salmonellosis alia	2834	2950	2735	2799	
paratyphoid b	8	4	3	34	
ornithosis	3	1	3	0	
shigellosis	107	104	86	70	
Nephropatia epid (Puumalavirus infection)	907	758	1305	2299	

* These are revised figures.

** These figures represent preliminary data.

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars and other similar fora for exchange

For each such event, the following information should be provided:

- name of the conference, etc.	NBC-defence symposium 2000
- arranging organisation(s), etc.	The Association of Finnish Chemical Societies, Section for NBC protection, rescue and civil defence
- time	13-15 June 2000
- place	Helsinki University of Technology, Espoo, Finland
- main subject(s) for the conference, etc.	NBC-defence questions
- conditions for participation	open participation
- point of contact for further information, registration, etc.	The Association of Finnish Chemical Societies, NBC 2000 Hietaniemenkatu 2, FIN-00100 Helsinki, Finland Fax:+358-9-408 780

2. Information regarding other opportunities http://www.vtt.fi/aut/rm/spt/

FRANCE

16 May 2000

La Mission permanente de la France auprès des Nations Unies présente ses compliments au Secrétariat de l'Organisation des Nations Unies et a l'honneur de lui transmettre les informations et données jointes en annexe, qui sont fournies par la France en application des mesures de confiance adoptées dans sa déclaration finale par la Troisième Conférence des Parties chargées de l'examen de la convention sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques (biologiques) ou à toxines et sur leur destruction.

Mesure	Déjà déclarée	Rien de nouveau à déclarer
A, partie 1	☐	☐
A, partie 2 i)	☐	☐
A, partie 2 ii)	☐	☐
A, partie 2 iii)	☐	☐
B i)	☒	☐
B ii)	☒	☐
C	☐	☐
D	☐	☐
E	☒	☐
F	☐	☒
G	☒	☐

(Prière de cocher la(les) case(s) appropriée(s).)

Date: ....21 AVRIL 1991..

Etat partie à la Convention: ....FRANCE...........................

MESURE A

PARTIE 1 : ECHANGE DE DONNEES SUR LES CENTRES DE RECHERCHE ET LABORATOIRES

Mesure A

Partie 1 Echange de données sur les centres de recherche et laboratoires

1. Nom(s) de l'installation : Laboratoire P4 haute Sécurité Jean Mérieux

2. Organisme ou société responsable : La Fondation Marcel Mérieux (17, rue Bourgelat 69002 Lyon)

3. Lieu et adresse postale : 29, Avenue Tony Garnier 96007 Lyon

4. Source (s) de financement de l'activité :

La Fondation a financé la construction et l'équipement du Laboratoire et a constitué une équipe spécifique de recherche (chercheurs et techniciens) pour le lancement des programmes d'activités et le tutorat des équipes extérieures pouvant avoir recours au laboratoire P4

5. Nombre d'unités de confinement à haute sécurité :

La zone P4 du Laboratoire Jean Mérieux d'une superficie de 140 m^2 est répartie en deux zones «laboratoires » pouvant fonctionner simultanément et une zone «animalerie» ainsi que des zones «d'accès» (sas et douches)

6. Portée et description générale des activités, y compris notamment le (s) type (s) de micro-organismes et/ou de toxines étudiés et détenus :

Mettre à disposition des chercheurs des outils de référence pour le diagnostic et la recherche fondamentale sur les maladies émergentes. Le stock de virus sera constitué dans l'ordre suivant (2 virus ne seront jamais amplifiés au même moment dans le laboratoire) : virus de Mopéia, virus de Lassa souche Josiah, virus de la Choriomeningite Lymphocytaire (LCMV), virus de Reston, virus de Marburg, virus Ebola, virus de la fièvre jaune, virus de la fièvre hémorragique de Crimée-Congo, virus Nipah.

MESURE A

PARTIE 2 : ECHANGE D'INFORMATIONS SUR
LE PROGRAMME NATIONAL DE RECHERCHE/DEVELOPPEMENT
EN MATIERE DE DEFENSE BIOLOGIQUE

Formule A - Partie 2 i)

Declaration de programme national de recherche-développement en matière de defense biologique

1 L'Etat partie applique-t-il un programme national de recherche-développement en matière de defense biologique sur son territoire ou en un lieu quelconque placé sous sa juridiction ou sous contrôle ?

Les travaux relevant d'un tel programme porteraient notamment sur la prophylaxie, les etudes du pouvoir pathogène et de virulence, les techniques de diagnostic, l'aérobiologie, la détection, le traitement, la toxinologie, la protection physique, la décontamination et d'autres recherches apparentées

Oui

Dans l'affirmative, remplir la partie 2 ii) de la Formule A - description du programme

Programme national de recherche-développement en matière de défense biologique

II Description

1 Indiquer les objectifs et le financement du programme et résumer les principales activités de recherche-développement menées dans le cadre du programme, en particulier dans les secteurs suivants : techniques de diagnostic, aérobiologie, détection, traitement, protection physique, décontamination et autres recherches

Le programme de défense contre les agents d'origine biologique exécuté au CEB a pour objet

1 - l'évaluation des risques, en particulier ceux liés aux développements des biotechnologies

2 - la détection et l'identification des agents d'origine biologique et l'étude de moyens à mettre en œuvre pour la détection rapide de terrain ou en laboratoire et l'identification générique et/ou taxonomique de ces agents

3 - la protection contre les agents d'origine biologique en particulier l'efficacité des systèmes de protection des voies respiratoires

L'objectif de ce programme est de définir des contre-mesures efficaces applicables notamment aux agents bactériens, aux toxines comme par exemple Bacillus anthracis ou la toxine Botulinique. L'intérêt de ces études est de pouvoir doter l'armée française de moyens de détection et de protection efficaces qui puisse dissuader un agresseur potentiel en réduisant considérablement la puissance et l'utilité des armes biologiques.

Exemples d'activités

Evaluation des risques : des études sont menées en collaboration avec le Service de Santé des Armées sur le pouvoir pathogène de certaines souches de bacillus thuringiensis employées en agriculture

Détection : différents travaux sont menés dans le domaine de la détection locale (spectrométrie de masse, immunologie ...) et de l'identification en laboratoires (surtout par des techniques immunologiques ou PCR)

Protection : les aérosols représentent la menace militaire essentielle. Il est donc important de vérifier que les systèmes de protection des voies respiratoires sont efficaces contre des agressions potentielles. L'utilisation d'anticorps administrés par voie locale est étudiée à la fois comme prophylaxie non spécifique, mais également comme thérapeutique substitutive efficace en cas de polyrésistance aux anti-infectieux et/ou d'immunodépression

Expertise au profit des organismes chargés du désarmement : à côté de son activité au profit des Etats-Majors et de la Défense, le Secrétariat Général de la Défense Nationale, le Ministère de la Défense et le Ministère des Affaires Etrangères font appel aux experts du CEB pour toutes les questions techniques relatives aux aspects du aux experts du CEB pour toutes les questions techniques relatives aux questions de desarmement et de contrôle dans le domaine relatif aux agents d'origine biologique.

2. Indiquer le montant total des fonds affectes au programme et leurs sources

50 MF/an en provenance du ministere de la Defense

3. Certains elements de ce programme sont-ils executes sous contrat avec l'industrie, des institutions universitaires ou dans d'autres installations ne relevant pas de la Defense ?

Oui

4. Dans l'affirmative, quelle est la proportion du total des fonds affectes au programme depenses dans ces installations, sous contrat ou autre ?

10 % environ

5. Indiquer succinctement les objectifs et les secteurs de recherche du programme executes sous contrat et dans d'autres installations au moyen des fonds indiques au paragraphe 4.

Developpement de reactifs et de materiels pour la detection en vue de la mise au point de systeme de detection rapide. Etudes sur l'application des anticorps ou de sondes genetiques a des biocapteurs. Ces travaux sont commandes au titre de contrats de recherches ou de developpement.

6. Indiquer la structure (organisation) du programme et ses relations hierarchiques (sans omettre les installations individuelles participant au programme).

Les objectifs du programme d'etudes de defenses contre les agents d'origine biologique sont definis par le ministre de la Defense qui en confie l'execution au Service de Sante des Armees et a la DGA/DSP. Le directeur du CEB est responsable de la realisation d'une partie du programme confie par la DGA/DSP. Les laboratoires d'exécution sont decrits dans l'organigramme joint.

7. Fournir une declaration conformement a la partie 2 (iii) de la Formule A pour chacune des installations, gouvernementales ou non, dont une partie importante des ressources sont consacrees au programme national de recherche-developpement en matiere de defense biologique, sises sur le territoire de l'Etat, auteur de la declaration ou en lieu quelconque place sous sa juridiction ou son contrôle.

Programme national de recherche-developpement en matiere de defense biologique

III. Installations

Remplir la formule pour chaque installation declaree conformement au paragraphe 7 de la Formule A, partie 2 iii).

Dans le cas d'installations mixtes, fournir les renseignements ci-après uniquement pour la partie de l'installation consacrée à la recherche-développement en matière de défense.

1. Nom de l'installation : Centre d'Etudes du Bouchet

2. Emplacement de l'installation (indiquer l'adresse, les coordonnées géographiques)

BP n° 3 – 91710 VERT-le-PETIT

3. Superficie des locaux de laboratoire, par niveau de confinement

BL2 150 (m2)

BL3 30 (m2)

BL4 0 (m2)

Superficie totale des laboratoires 180 (m2)

4. Organigramme de chaque installation

i) Total des effectifs 18

ii) Repartition du personnel
Militaire 4
Civil 14

iii) Repartition du personnel par categorie 8
Scientifiques 8
Techniciens 5
Ouvriers 5
Personnel administratif et auxiliaire 0

iv) Liste des disciplines scientifiques
Representées au sein du personnel Scientifique et technique chimistes, microbiologistes biochimistes, immunologistes

v) Y a-t-il des personnes employées sous contrat dans l'installation ?

Non

Dans l'affirmative, indiquer leur nombre approximatif :

vi) Quelles sont la ou les sources de financement de l'activite realisee dans l'installation ? Mentionner si l'activite est entierement ou partiellement financee par le Ministre de la Defense.

Financement integral par le Ministere de la Defense

vii) Quels sont les montants des fonds alloués aux secteurs de programme ci-après :

Recherche : 25 MF
Développement : 20 MF
Essais et évaluation : 5 MF

viii) Décrire brièvement la politique adoptée en matière de publication dans l'installation :

Encouragement à la publication des travaux réalisés et participation à des colloques ou congrès (voir mesures de confiance C (publications)).

ix) Fournir une liste des documents et rapports accessibles au public qui portent sur les travaux réalisés au cours des douze derniers mois (indiquer les auteurs, les titres et les références complètes) :

Liste des publications fournies au titre des mesures de confiance C (publications).

5. Décrire succinctement les travaux sur la défense biologique réalisés dans l'installation, y compris le(s) type(s) de micro-organismes et/ou toxines étudiés, et résumer les études en plein air sur les aérosols biologiques.

Les études sont celles décrites au chapitre 2ii) pour la partie concernant les études de défense réalisées au Centre d'Etudes du Bouchet. Il n'y a pas d'études menées en plein air. Le CEB ne conduit aucune étude sur des virus (sauf sur le virus de la grippe) et/ou prions.

Liste des actions de recherche de laboratoires civils réalisés dans le cadre de la défense face au risque biologique :

« Conception d'inhibiteurs sélectifs de l'activité métallopeptidase des neurotoxines botuliques » (INSERM)

« Effet de l'expression des gènes *inv* et *yadA* sur la virulence de *Yersinia pestis* » (Institut Pasteur)

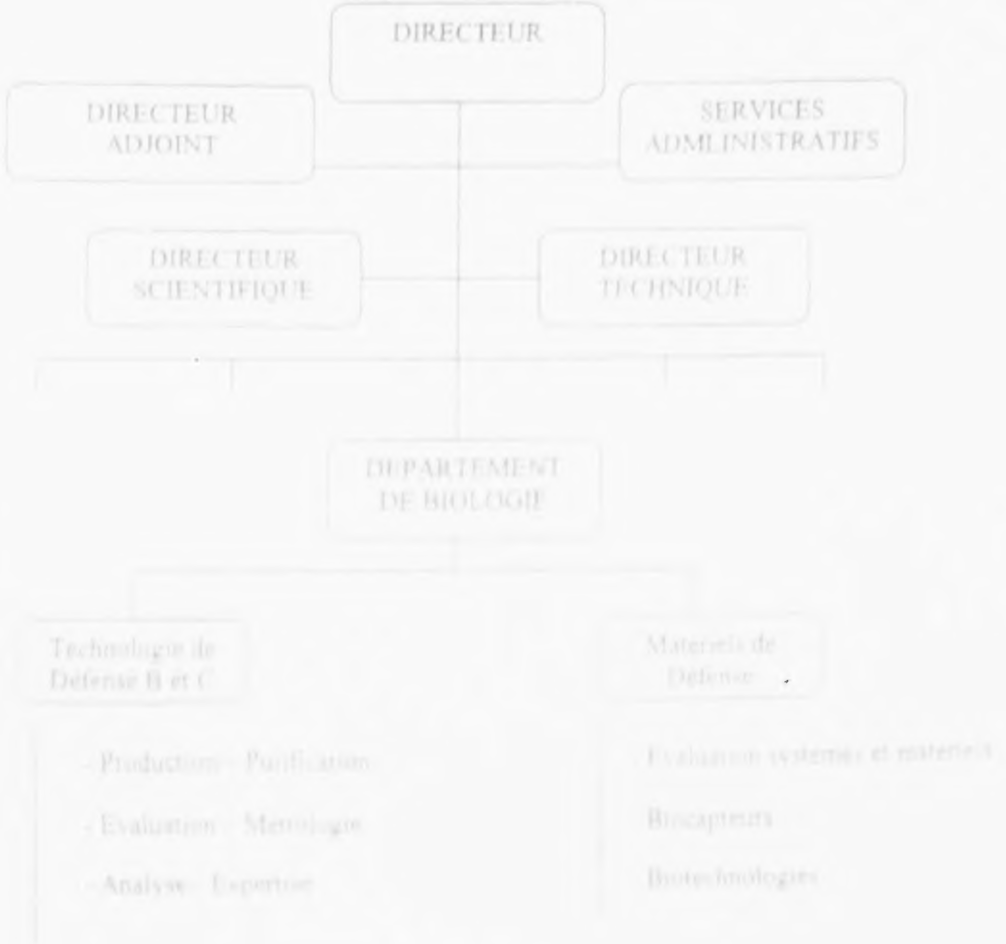
« Mise au point d'un vaccin acellulaire contre le charbon » (Institut Pasteur)

« Facteurs impliqués dans la persistance de *bacillus anthracis* et des bacilles apparentés dans l'environnement » (Institut Pasteur)

« Récepteurs et trafic intracellulaire des neurotoxines tétanique et botulique » (CNRS)

« Potentiel immunoprotecteur de la phosphorylcholine vectorisée sur microsphères biodégradables contre les infections aérogènes » (Université Paris VI)

ORGANIGRAMME SIMPLIFIE DES LABORATOIRES
DU
CENTRE D'ETUDES DU BOUCHET
RESPONSABLES DES ETUDES DE DEFENSE SUR LES AGENTS D'ORIGINE BIOLOGIQUE


DIRECTEUR
DIRECTEUR ADJOINT
SERVICES ADMLINISTRATIFS
DIRECTEUR SCIENTIFIQUE
DIRECTEUR TECHNIQUE
DEPARTEMENT DE BIOLOGIE
Technologie de Défense B et C
- Production - Purification
- Evaluation - Metrologie
- Analyse - Expertise
Materiels de Defense
Evaluation systemes et materiels
Biocapteurs
Biotechnologies

MESURE C

ENCOURAGEMENT DE LA PUBLICATION DES RESULTATS ET PROMOTION DE L'UTILISATION DES CONNAISSANCES

CENTRE D'ETUDES DU BOUCHET
LISTE DES PUBLICATIONS
SITE DU BOUCHET
ANNEE 1999

TITRE	NOM DE LA REVUE OU DE L'EDITEUR	AUTEURS
1 - Meiotic instability of human minisatellite CEB1 in yeast requires DNA double strand breaks	Nature genetics	Vergnaud G, Debrauwere H, Buard J, Tessier J, Aubert J, Nicolas A
2 - Molecular biological techniques for subspecies identification	Nato advanced workshop Bucarest	Garrigue H, Sourdive D
3 - Analysis of intact whole bacteria fatty acids by in situ methylation/ temperature control pyrolysis ion trap mass spectrometry (TCPy/MS/MS)		Wind F
4 - The Ba 813 chromosomal DNA sequence effectively trace the whole B anthracis community	Journal of applied microbiology 1999,87,224-228	Ramisse V, Patra G, Vaissaire J, Mock M
5 - Infections à Pseudomonas aeruginosa : immunothérapie et immunoprophylaxie	Perspective Pseudomonas 1999 15 : 3-12	Ramisse F
6 - Bacillus thuringiensis ser H34 isolated from human and insecticidal strains ser 3a3b and H14 can lead to death of immunocompetent mice after pulmonary infection	FEMS Immunology and medical Microbiology 1999 24 : 43-47	Hernandez E, Ramisse F, Cruel T, Levagueresse R, Cavallo J D
7 - Abolition of swarming of Proteus	J of clinical Microbiology 1999 – 37(10) 3435	Hernandez E, Ramisse F, Cavallo J D
8 - Vaccinations et risque biologique militaire	Coll scien Med et Arm 1999-125-138	Jouan A, Ramisse F, Binder P
9 - Développement de vaccins et de moyens de prévention pour les forces armées	Coll. scien. Med et Arm 1999-167-182	Binder P, Ramisse F, Sourdive D, Michel P, Jouan A

CENTRE D'ETUDES DU BOUCHET
COMMUNICATIONS EN CONGRES
SITE DU BOUCHET
ANNEE 1999

AUTEURS	DATE et LIEU	TITRE DE LA REVUE
AFONSO Carlos	Juin 1999 - DALLAS - congrès de spectrométrie de masse	Behavior of multiply-charged myoglobine in the gas phase toward dissociation in ion trap mass spectrometer
AFONSO Carlos	Juin 1999 - DALLAS - idem	Detection of biological agents as toxins and identification of active sites using LC/ESI-ITMS
GARRIGUE Henri	5 juin 1999 - BUCAREST - Nato Workshop	Molecular biological techniques for subspecies identifiation
SOURDIVE David	idem	idem
RAMISSE Françoise	27 juin 1999 - SAINTE-MAXIME - 9^e European Workshop on bacterial protein toxins	Pouvoir pathogène de Bacillus Thuringiensis H34 dans un modèle d'infection cutanée et pulmonaire chez la souris : le rôle probable de l'hémolysine
RAMISSE Vincent	11-13/08/1999 - TAOS - (NEW MEXICO) (USA) -	Phylogenetic structure of the Bacillus cereus group based on comparative analysis of gyrB sequences and gyrB-gyrA and 16-23S rDAN intergenic spacer region
WIND Franck	9 septembre 1999- NANCY - Société Française de spectrométrie de masse	Détection de bactéries par analyse de leur profil d'acides gras par méthylation «in situ»/Pyrolyse/ITMS : Optimisation de l'auto- ionisation
RAMISSE Françoise	27 juin au 2 juillet 1999 - SAINTE-MAXIME - 9^e European Workshop on bacterial protein protein toxins	Pathogenicity of *Bacillus thuringiensis* H34 in murine models of Cutaneous or pulmonary infections : the probable role of haemolysin -
RAMISSE Françoise	3 et 4 septembre 1999 - MARSEILLE - Sixièmes actualités du Pharo	Pouvoir pathogène de *Bacillus thuringiensis* H34-Konkukian dans deux modèles murins d'infections cutanée et pulmonaire : le rôle de l'hémolysine
RAMISSE Françoise	26-29 septembre 1999 - SAN FRANCISCO - 39^e ICAAC	Inverse correlation between *Pseudomonas aeruginosa* antibiotic resistance and virulence in a mouse model of pneumonia

MESURE D

◆

PROMOTION ACTIVE DE CONTACTS

Mesure D

Promotion active de contacts :

Répartition des stages et visites en 1999 en Biologie

Répartition disciplinaire

Bactériologie, virologie, parasitologie :	26
Biologie cellulaire, moléculaire et médecine :	93
Neurosciences :	9
Biochimie :	45
Biologie végétale, animale, écologie et environnement :	24
Total	197

Répartition géographique

Amériques :	8
Afrique :	71
Asie-Pacifique :	33
Europe centrale et orientale :	65
Moyen-Orient :	18
Total	197

GEORGIA

7 June 2000

The Permanent Mission of Georgia to the United Nations presents its compliments to the Weapons of Mass Distraction Branch of the Department of Disarmament Affairs of the United Nations and has the honor to transmit herewith information regarding development, production, stockpiling and use of the Bacteriological and Toxic weapons and on their distraction in Georgia.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. **Declaration form on Nothing to Declare or Northing New to Declare for use in the information exchange**

Measure	Nothing to declare	Nothing new to declare
A, part 1	☑	☐
A, part 2 (i)	☑	☐
A, part 2 (ii)	☑	☐
A, part 2 (iii)	☑	☐
B (i)	☑	☐
B (ii)	☑	☐
C	☑	☐
D	☑	☐
E	☑	☐
F	☑	☐
G	☑	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 18.05.2000

State Party to the Convention: Georgia

2. CONFIDENCE-BUILDING MEASURE "A":

Part 1: Exchange of data on research centres and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following:

> "Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialize in permitted biological activities directly related to the Convention."

Modalities

The Third Review Conference agreed that data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the 1983 WHO Laboratory Biosafety Manual such as those designated as biosafety level 4 (BL4) or P4 or equivalent standards.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/

2. Responsible public or private organization or company

3. Location and postal address

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

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1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Part 2: Exchange of information on national biological defence research and development programmes

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programmes on biological defence, the States Parties will declare whether or not they conduct such programmes. States Parties agreed to provide, annually, detailed information on their biological defence research and development programmes including summaries of the objectives and costs of effort performed by contractors and in other facilities. If no biological defence research and development programme is being conducted, a "null" report will be provided. No biological defence research and development programme is being conducted in Georgia. ("null" report).

States Parties will make declarations in accordance with the attached forms, which require the following information:

(1) the objective and summary of the research and development activities under way indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;

(2) whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the programme;

(3) the organizational structure of the programme and its reporting relationships; and

(4) the following information concerning the defence and other governmental facilities in which the biological defence research and development programme is concentrated;

(a) location;

(b) the floor areas (sqM) of the facilities including that dedicated to each of BL2, BL3 and BL4 level laboratories;

(c) the total number of staff employed, including those contracted full time for more than six months;

(d) numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;

(e) a list of the scientific disciplines of the scientific/engineering staff;

(f) the source and funding levels in the following three areas: research, development, and test and evaluation; and

(g) the policy regarding publication and a list of publicly-available papers and reports.

Form A, part 2 (i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Yes [✓ No]

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes/ [✓ No]

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (iii)

National biological defence research and development programme

Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

2. Where is it located (include both address and geographical location)?

3. Floor area of laboratory areas by containment level:

BL2 ______________________ (sqM)

BL3 ______________________ (sqM)

BL4 ______________________ (sqM)

Total laboratory floor area ______________________ (sqM)

4. The organizational structure of each facility.

(i) Total number of personnel ______________

(ii) Division of personnel:

Military ______________

Civilian ______________

(iii) Division of personnel by category:

Scientists ______________

Engineers ______________

Technicians ______________

Administrative and support staff ______________

(iv) List the scientific disciplines represented in the scientific/engineering staff.

(v) Are contractor staff working in the facility? If so, provide an approximate number.

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

(vii) What are the funding levels for the following programme areas:

Research ____________

Development ____________

Test and evaluation ____________

(viii) Briefly describe the publication policy of the facility:

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

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* Including viruses and prions.

3. CONFIDENCE-BUILDING MEASURE "B":

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins

At the Third Review Conference it was agreed that States Parties continue to implement the following:

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins, and on all such events that seem to deviate from the normal pattern as regards type, development, place, or time of occurrence. The information provided on events that deviate from the norm will include, as soon as it is available, data on the type of disease, approximate area affected, and number of cases.

Modalities

The Third Review Conference agreed the following definition:

An outbreak or epidemic is the occurrence of an unusually large or unexpected number of cases of an illness or health-related event in a given place at a given time. The number of cases considered as unusual will vary according to the illness or event and the community concerned.

Furthermore, reference was made to the following definitions:

An epidemic of infectious disease is defined as the occurrence of an unusually large or unexpected number of cases of a disease known or suspected to be of infectious origin, for a given place and time. It is usually a rapidly evolving situation, requiring a rapid response (WHO internal document CDS/Mtg/82.1).

The occurrence in a community or region of cases of an illness, specific health-related behaviour, or other health-related events clearly in excess of normal expectancy. The community or region, and the time period in which the cases occur, are specified precisely. The number of cases indicating the presence of an epidemic will vary according to the agent, size and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence: epidemicity is thus relative to usual frequency of the disease in the same area, among the specified population, at the same season of the year. A single case of a communicable disease long absent from a population or first invasion by a disease not previously recognized in that area requires immediate reporting and full field investigation: two cases of such a disease associated in time and place may be sufficient evidence to be considered an epidemic. (J.M. Last, A Dictionary of Epidemiology, Oxford University Press, New York, Oxford, Toronto, 1983.)

The Third Review Conference agreed on the following:

1. In determining what constitutes an outbreak States Parties are recommended to take guidance from the above.

2. Since no universal standards exist for what might constitute a deviation from the normal pattern, States Parties agreed to utilize fully existing national reporting systems on human diseases as well as animal and plant diseases, where possible, and systems within the WHO to provide annual update of background information on diseases caused by organisms which meet the criteria for risk groups II, III and IV according to the classification in the 1983 WHO Laboratory Biosafety Manual, the occurrence of which, in their respective areas, does not necessarily constitute a deviation from normal patterns *.

3. Exchange of data on outbreaks that seem to deviate from the normal pattern is considered particularly important in the following cases:

- when the cause of the outbreak cannot be readily determined or the causative agent ** is difficult to diagnose,
- when the disease may be caused by organisms which meet the criteria for risk groups III or IV, according to the classification in the 1983 WHO Laboratory Biosafety Manual,
- when the causative agent is exotic to a given region,
- when the disease follows an unusual pattern of development,
- when the disease occurs in the vicinity of research centres and laboratories subject to exchange of data under item A,
- when suspicions arise of the possible occurrence of a new disease.

4. In order to enhance confidence, an initial report of an outbreak of an infectious disease or a similar occurrence that deviate from the normal pattern should be given promptly after cognizance of the outbreak and should be followed up by annual reports.

To enable States Parties to follow a standardized procedure, the Conference has agreed that Form B (ii) should be used, to the extent information is known and/or applicable, for the exchange of initial as well as annual information.

5. In order to improve international cooperation in the field of peaceful bacteriological (biological) activities and in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions, States Parties are encouraged to invite experts from other States Parties to assist in the handling of an outbreak, and to respond favourably to such invitations.

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* This information should be provided in accordance with Form B (i).

** It is understood that this may include organisms made pathogenic by molecular biology techniques, such as genetic engineering.

Form B (i)

Background information on outbreaks of reportable infectious diseases

Disease		Number of cases per year			
	1988	1989	1990	1991	1992

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1. Time of cognizance of the outbreak ....

2. Location and approximate area affected ....

3. Type of disease/intoxication ....

4. Suspected source of disease/intoxication ....

5. Possible causative agent(s) ....

6. Main characteristics of systems ....

7. Detailed symptoms, when applicable

   - respiratory ....
   - circulatory ....
   - neurological/behavioural ....
   - intestinal ....
   - dermatological ....
   - nephrological ....
   - other ....

8. Deviation(s) from the normal pattern as regards

   - type ....
   - development ....
   - place of occurrence ....
   - time of occurrence ....
   - symptoms ....
   - virulence pattern ....

- drug resistance pattern ....
- agent(s) difficult to diagnose ....
- presence of unusual vectors ....
▲ other ....

9. Approximate number of primary cases ....
10. Approximate number of total cases ....
11. Number of deaths ....
12. Development of the outbreak ....
13. Measures taken ....

4. CONFIDENCE-BUILDING MEASURE "C":

- Encouragement of publication of results and promotion of use of knowledge

At the Third Review Conference it was agreed that States parties continue to implement the following:

> "Encouragement of publication of results of biological research directly related to the Convention, in scientific journals generally available to States parties, as well as promotion of use for permitted purposes of knowlege gained in this research."

Modalities

The Third Review Conference agreed on the following:

1. It is recommended that basic research in biosciences, and particularly that directly related to the Convention should generally be unclassified and that applied research to the extent possible, without infringing on national and commercial interests, should also be unclassified.

2. States parties are encouraged to provide information on their policy as regards publication of results of biological research, indicating, *inter alia*, their policies as regards publication of results of research carried out in research centres and laboratories subject to exchange of information under item A and publication of research on outbreaks of diseases covered by item B, and to provide information on relevant scientific journals and other relevant scientific publications generally available to States parties.

3. The Third Review Conference discussed the question of cooperation and assistance as regards the safe handling of biological material covered by the Convention. It concluded that other international forums were engaged in this field and expressed its support for efforts aimed at enhancing such cooperation.

5. CONFIDENCE-BUILDING MEASURE "D":

- Active promotion of contacts

At the Third Review Conference it was agreed that States parties continue to implement the following:

> "Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis."

Modalities

The Third Review Conference agreed on the following:

In order to actively promote professional contacts between scientists, joint research projects and other activities aimed at preventing or reducing the occurrence of ambiguities, doubts and suspicions and at improving international cooperation in the field of peaceful bacteriological (biological) activities, States parties are encouraged to provide information, to the extent possible:

- on planned international conferences, seminars, symposia and similar events dealing with biological research directly related to the Convention,
- on other opportunities for exchange of scientists, joint research or other measures to promote contacts between scientists engaged in biological research directly related to the Convention.

To enable States parties to follow a standardized procedure, the Third Review Conference has agreed that Form D should be used for exchange of information under this item.

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. ....
- arranging organization(s), etc. ....
- time ....
- place ....
- main subject(s) for the conference, etc. ....

....

- conditions for participation ....

....

- point of contact for further information, registration, etc. ....

....

....

2. Information regarding other opportunities

....

....

....

6. CONFIDENCE-BUILDING MEASURE "E"

- Declaration of legislation, regulations and other measures

At the Third Review Conference the States parties agreed to implement the following:

As an indication of the measures which they have taken to implement the Convention, States parties shall declare whether they have legislation, regulations or other measures:

(a) to prohibit the development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery, specified in Article I of the Convention, within their territory or anywhere under their jurisdiction or control;

(b) in relation to the export or import of micro-organisms pathogenic to man, animals and plants or of toxins in accordance with the Convention;

States parties shall complete the attached form (Form E) and shall be prepared to submit copies of the legislation or regulations, or written details of other measures on request to the United Nations Department for Disarmament Affairs or to an individual State party. On an annual basis States parties shall indicate, also on the attached form, whether or not there has been any amendment to their legislation, regulations or other measures.

Form E

Declaration of legislation, regulations and other measures

Relating to	Legislation	Regulations	Other measures	Amended since last year
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES [✓ NO]	YES [✓ NO]	YES [✓ NO]	YES [✓ NO]
(b) Exports of micro-organisms* and toxins	YES [✓ NO]	YES [✓ NO]	YES [✓ NO]	YES [✓ NO]
(c) Imports of micro-organisms* and toxins	YES [✓ NO]	YES [✓ NO]	YES [✓ NO]	YES [✓ NO]

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* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

7. CONFIDENCE-BUILDING MEASURE "F":

- Declaration of past activities in offensive and/or defensive biological research and development programmes

In the interest of increasing transparency and openness, States parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programmes since 1 January 1946.

If so, States parties shall provide information on such programmes, in accordance with Form F.

8. CONFIDENCE-BUILDING MEASURE "G"

- Declaration of vaccine production facilities

To further increase the transparency of biological research and development related to the Convention and to broaden scientific and technical knowledge as agreed in Article X, each State party will declare all facilities, both governmental and non-governmental, within its territory or under its jurisdiction or control anywhere, producing vaccines licensed by the State party for the protection of humans. Information shall be provided on Form G attached.

Form G

Declaration of vaccine production facilities

1. Name of facility:

2. Location (mailing address):

3. General description of the types of diseases covered:

Form F

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Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party.

2. Past offensive biological research and development programmes:

   - YES - [✓ NO]

   - Period(s) of activities

   - Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, t destruction programme of such agents and weapons, and other related research.

3. Past defensive biological research and development programmes:

   - YES - [✓ NO]

   - Period(s) of activities

   - Summary of the research and development activities indicating whether or not work was conducted in the following areas prophylaxis, studies on pathogenecity and virulence, diagnosti techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related resear with location if possible.

GERMANY

12 April 2000

The Permanent Mission of Germany to the United Nations presents its compliments to the Secretariat of the United Nations and, with reference to resolution 46/35, has the honour to communicate the enclosed information

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE

Measure	Nothing to declare	Nothing new to declare
A, part 1		
A, part 2 (i)		X
A, part 2 (ii)		
A, part 2 (iii)		
B (i)		
B (ii)	X	
C		
D		
E		X
F		X
G		

Date: 15 April 2000
State Party to the Convention: GERMANY

Form A, part 1

Exchange of data on research centres and laboratories

1. **Name(s) of facility:**

   Bundesforschungsanstalt für Viruskrankheiten der Tiere

2. **Responsible public or private organization or company:**

   Federal Ministry of Food, Agriculture and Forestry

3. **Location and postal address:**

   Paul-Ehrlich-Str. 28
   D-72076 Tübingen

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:**

   Federal Ministry of Food, Agriculture and Forestry

5. **Number of maximum containment units within the research centre and/or laboratory, with the indication of their respective size (m^2):**

   two maximum containment units, approx. 30 m^2,
   (not appropriate for work with human pathogens)

6. **If no maximum containment unit, indicate highest level of protection:**

   n.a.

7. **Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:**

   Diagnosis of and research on animal diseases

   Veterinary medicine: mechanisms of pathogenesis, vaccines, diagnosis of foot and mouth disease, bovine spongioform encephalopathy, African swine fever, classical swine fever and other animal diseases caused by viruses

Form A, part 1

Exchange of data on research centres and laboratories

1. **Name(s) of facility:**

Institut für Virologie der Philipps Universität Marburg

2. **Responsible public or private organization or company:**

Federal State of Hessen

3. **Location and postal address:**

Robert-Koch-Str. 17
D-35037 Marburg

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:**

Deutsche Forschungsgemeinschaft, Federal Ministry of Education and Research, European Union

5. **Number of maximum containment units within the research centre and/or laboratory, with the indication of their respective size (m^2):**

one maximum containment unit, 30 m^2

6. **If no maximum containment unit, indicate highest level of protection:**

n.a.

7. **Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:**

Basic research on Marburg virus, Ebola virus and Lassa virus

Form A, part 1

Exchange of data on research centres and laboratories

1. **Name(s) of facility:**

   Bernhard-Nocht-Institut für Tropenmedizin

2. **Responsible public or private organization or company:**

   Federal State of Hamburg

3. **Location and postal address:**

   Bernhard-Nocht-Straße 74
   D-20359 Hamburg

4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:**

   State of Hamburg, Federal Republic of Germany and Federal States;
   one research contract funded by Federal Ministry of Defence

5. **Number of maximum containment units within the research centre and/or laboratory, with the indication of their respective size (m^2):**

   one maximum containment unit, approx. 80 m^2

6. **If no maximum containment unit, indicate highest level of protection:**

   n.a.

7. **Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:**

   Diagnosis of and research on viruses causing hemorrhagic fevers (Lassa, Ebola, Marburg, Hanta)

   Development of methods for the detection of Dengue and Arena viruses

Form A, part 2 (II)

National Biological Defence Research and Development Program

II: Description

1. **State the objectives** and funding of the program and summarize the principal **research** and development activities conducted in the program.

    The R&D activities of the national program include:
    Prophylaxis, diagnostic techniques, sampling and detection techniques, toxinology, decontamination and physical protection

2. **State the total** funding for the program and its source.

    The total funding in 1999 was approx. 10.0 Mio Deutsche Mark.
    The program is funded by the Federal Ministry of Defence.

3. **Are aspects** of this program conducted under contract with industry, academic institutions, or in other non-defence facilities?

    Yes

4. **What proportion** of the total funds for the program is expended in these contracted or other facilities?

    approx. 50 percent

5. **Summarize the objectives** and research areas of the program performed by contractors and in other facilities with the funds identified under para 4.

    The objective of the contracted activities is to provide pertinent expertise and **hardware to the Federal Ministry of Defence** for the improvement of the B-defence capabilities. The research areas are the same as mentioned above under # 1.

6. **Provide a diagram** of the organisational structure of the program and the reporting **relationships** (include individual facilities participating in the program).

    See 1992 declaration

7. **Provide a declaration** in accordance with Form A, part 2 (iii) **for each facility**, both **governmental** and non-governmental, **which has a substantial proportion of its resources devoted** to the national biological defence research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

    Three Forms A, part 2 (iii) are attached.

Form A, part 2 (iii)

National Biological Defence Research and Development Program

1. What is the name of the facility?

Wehrwissenschaftliches Institut für Schutztechnologien - ABC-Schutz
(Federal Armed Forces Scientific Institute for Protection Technologies and NBC-Protection)

2. Where is it located?

D-29633 Munster/Oertze, Humboldtstr.
(53°00 north, 10°08 east)

3. Floor area of laboratory areas by containment level:

BL 2	520	m^2
BL 3	230	m^2
BL 4	–	m^2
Total Laboratory Floor Area	750	m^2

4. The organisational structure of the facility:

The workload of the Biology Section of the facility is approx. 70 percent in B-defence and approx. 30 percent in environmental protection. The following personnel figures cover the total strength for both working areas because of the engagement of some of the personnel in both areas.

I)	Total number of personnel:	34
II)	Division of personnel	
	Civilian	34
III)	Division of personnel by category	
	Scientists	11
	Engineers	04
	Technicians	13
	Admin. and support staff	06

IV) Represented scientific disciplines:
biology, biochemistry, immunology, molecular biology, bacteriology, mycology, virology, toxicology, toxinology, biotechnology, pathology, environmental toxicology, ecology, veterinary medicine, biotechnology)

V) Contractor staff: 00

VI) Source of funding:
Federal Ministry of Defence

VII) Funding levels for the following program areas:
The funding for the 70 percent share for personnel, consumable items and equipment in 1999 was approx. 3.0 Mil DM

Research	20 %
Development	50 %
Test and Evaluation	30 %

VIII) Publication policy
Results will be published primarily in reports to the Federal office for Military Technology and Procurement and to the Federal Ministry of Defence

IX) Lists of public available papers and reports resulting from the work during the previous 12 month:
In 1999 no results from the field of B-Defence were published in scientific journals.

5. Brief description of the biological defence work carried out at the facility, including types of micro-organisms and/or toxins studied, as well as outdoor studies of biological aerosols:

a. Development of early-warning systems permitting non-specific identification of toxins, micro-organisms and viruses
b. Development of equipment and procedures for rapid and accurate identification of toxins and pathogenic agents in samples from air, water, soil, vegetation (sensor-equipped collectors, detection sticks)
c. Development of procedures for disinfection and decontamination

The current program covers non-human pathogen R I and pathogenic R II and R III organisms as well as low-molecular weight toxins; no work has been done with active R III viruses.

No outdoor studies of biological aerosols.

National Biological Defence Research and Development Program

1. What is the name of the facility?

   Zentrales Institut des Sanitätsdienstes der Bundeswehr München, Außenstelle Munster, Laborgruppe Med B-Schutz
   Die Einrichtung befindet sich auf dem Gelände des Wehrwissenschaftlichen Institutes für Schutztechnologien -ABC-Schutz (WIS) in Munster
   (Central Institute of the Medical Service of the Federal Armed Forces Munich, Location Munster, Medical B-Defence Laboratory, co-located with the Federal Armed Forces Scientific Institute for Protection Technologies and NBC-Protection (WIS) in Munster.)

2. Where is it located?

   D-29633 Munster/Oertze, Humboldtstr.
   (53°00' north, 10°08' east)

3. Floor area of laboratory areas by containment level:

BL 2	80 m^2
BL 3	collaboration with WIS
BL 4	– m^2
Total Laboratory Floor Area	80 m^2 (BL 3 as required on a case to case basis)

4. The organisational structure of the facility:

   The workload is 100 percent in B-defence.

I)	Total number of personnel:	2
II)	Division of personnel	
	Military	1
	Civilian	1
III)	Division of personnel by category	
	Scientists	1
	Technicians	1
IV)	Represented scientific disciplines: veterinary medicine, microbiology	

V) Contractor staff: 0

VI) Source of funding:
Federal Ministry of Defence

VII) Funding levels for the following program areas:
The funding for consumable items and equipment in 1999 was approx. 0.3 Mio DM

Development	70 %
Test and Evaluation	30 %

VIII) Publication policy
Results will be published primarily in reports to the Federal Ministry of Defence and in journals for military medicine or technology

IX) Lists of public available papers and reports resulting from the work during the previous 12 month:
In 1999 no results were published in journals.

5. Brief description of the biological defence work carried out at the facility, including types of micro-organisms and/or toxins studied, as well as outdoor studies of biological aerosols:

a. Development and evaluation of diagnostic systems permitting specific identification of micro-organism and toxins
b. Development of test kits for employment in deployable a containerised field laboratory

The current program covers pathogen R I, R II and R III organisms.

No outdoor studies of biological aerosols.

National Biological Defence Research and Development Program

1. What is the name of the facility?

Sanitätsakademie der Bundeswehr - Institut für Mikrobiologie
(Federal Armed Forces Medical Academy - Institute of Microbiology)

2. Where is it located?

D-80937 München, Neuherbergstr. 11
(48°12 north, 11°34 east)

3. Floor area of laboratory areas by containment level

BL 2	1071	m^2
BL 3	--	m^2
BL 4	--	m^2

Total Laboratory Floor Area 1071 m^2

4. The organizational structure of the facility:

I)	Total number of personnel:	22
II)	Division of personnel	
	Military	13
	Civilian	09
III)	Division of personnel by catagory	
	Scientists	07
	Engineers	00
	Technicians	13
	Admin. and support staff	02
IV)	Represented scientific disciplines: medicine, veterinary medicine (immunology, virology, toxinology, bacteriology and epidemiology)	
V)	Contractor staff:	00

VI) Source of funding:
Federal Ministry of Defence

VII) Funding levels for the following program areas:
The funding for personnel, consumable items and equipment in 1999 was approx. 2.3 Mio DM

Research	60 %
Development	30 %
Test and Evaluation	10 %

VIII) Publication policy
Results are published in scientific journals as well as in reports to the Federal Ministry of Defence and are presented in scientific meetings.

IX) Lists of publically available papers and reports resulting from the work during the previous 12 month:
See Annex 1

5. Brief description of the biological defence work carried out at the facility, including types of microorganisms and/or toxins studied, as wll as outdoor studies of biological aerosols:

a. Research in rapid detection and differentiation of Orthopox and Hanta viruses with poly- and monoclonal antibodies, DNA-Probes and PCR

b. Research in rapid detection and differentiation of Burkholderia, Francisella and Yersinia spp. with poly- and monoclonal antibodies, DNA-Probes and PCR

c. Production of monoclonal antibodies against genera Yersinia, Burkholderia, Francisella, Brucella, Orthopox and Filo viruses and production of test kits

d. Seroepidemiological studies of natural occuring Francisella tularensis, Hanta- and Sandflyfever-, Dengue- and West-Nile virus infections

e. Studies of the cellular immunity against Francisella tularensis

The current programme in this facility covers risk group R I and R II organisms.

No outdoor studies of biological aerosols.

Publications

Institute of Microbiology
German Armed Forces Medical Academy
Munich

1999

Finke, E.-J., H. Neubauer, R. Grunow und H. Meyer (1999):
Das Institut fur Mikrobiologie - Forschungsstatte im Dienste des Medizinischen B-Schutzes.
Wehrmedizinische Monatsschrift **43**, 9-12

Finke, E.-J., H. Neubauer, M. Putzker, P. Emmerich, G. Dobler, H. Schmitz, L. Zöller and H. Meyer (1999):
Detection of antibodies against sandfly fever virus by immunoblot with a recombinant nucleocapsid protein of Toscana virus.
Clinical Laboratory **45**, 23-28

Meyer, H., C. Schay, H. Mahnel, and M. Pfeffer (1999):
Characterization of orthopoxviruses isolated from man and animals in Germany.
Archives of Virology **144**, 491-501

Neubauer, H., U. Reischl, J. Köstler, S. Aleksic, E.-J. Finke and H. Meyer (1999):
Variations in the 16S rRNA gene sequence of *Yersinia enterocolitica* isolates influence the specificity of molecular identification systems.
Zentralblatt für Bakteriologie **289**, 329-337

Arun, S., H. Neubauer, A. Gurel, G. Ayyildiz, B. Kuscu, T. Yesildere, H. Meyer, and W. Hermanns (1999):
Equine glanders in Turkey.
Veterinary Record **144**, 255-258

Chantrey, J., H. Meyer, D. Baxby, M. Begoni, K. J. Bown, S. M. Feon, T. Jones, I. Montgomery, and M. Bennett (1999):
Cowpox 200 years after Jenner: reservoir hosts and geographic range.
Epidemiology and Infection **122**, 455-460

Scharninghausen, J., H. Meyer, M. Pfeffer, D. S. Davis, and R. Honeycutt (1999):
Genetic evidence for the existance of Dobrava virus among *Apodemus agranus* in Tazar, Hungary.
Emerging Infectious Diseases **5**, 468-470

Hentschke, J., H. Meyer, U. Wittstadt, A. Ochs, S. Burkhardt und A. Aue (1999):
Kuhpocken bei Kanadischen Bibern (Castor fiber canadensis) und Katzenbären (Ailurus fulgens).
Tierärztliche Umschau **54**, 311-317

Linde, H. J., Neubauer H., Meyer H., S. Aleksic, and N. Lehn (1999):
Identification of *Yersinia* Species by the Vitek Gram Negative Identification card.
Journal of Clinical Microbiology **37**, 211-214

Pfeffer, M., G. Burck und H. Meyer (1999):
Kuhpockenviren in Deutschland: Eine Analyse von 5 Fällen
Berliner und Münchner Tierärztliche Wochenschrift **112**, 334-338

Köchli, C., T. Wendland, K. Frutig, R. Grunow, S. Merlin and W.J. Pichler (1999)
CD80 and CD86 costimulatory molecules on circulating T cells of HIV infected individuals.
Immunol. Letters **65,** 197-201

Grunow, R. (1999):
10. International Congress of Immunology.
Wehrmedizinische Monatsschrift **43**, 63-64.

Finke, E.-J., J. Loscher and H. Koch (1999):
Planning of medical support for a threatened or actual biological environment.
Principles, policies and procedures
In: T. Sohns, V.A. Voicu, (eds.), NBC Risks, 69-93 KluwerAcademic Publisher.
Printed in The Netherland

Sohns, T., L. Szinicz, E.-J. Finke, M. Abend und D. van Beuningen (1999):
Gesundheitsschäden durch ABC-Kampfmittel und ähnliche Noxen.
in: ains Anästhesiologie, Intensivmedizin, Notfallmedizin, Schmerztherapie, Band 3
Hrsg. von G. Hempelmann, C. Krier und J. Schulte am Esch, Thieme, Stuttgart, 612-625

Form B (i)

Exchange of information on outbreaks of infectious diseases and similar occurences caused by toxins

Human Diseases
(cases)

	1995	1996	1997	1998	1999
Anthrax	0	0	0	0	0
Botulism	12	13	9	21	19
Brucellosis	35	23	25	18	21
Cholera	1	0	1	5	3
Glanders	0	0	0	0	0
Ornithosis	160	134	124	155	109
Plague	0	0	0	0	0
Q-fever	45	72	78	147	276
Shigellosis	1859	1504	1925	1591	1594
Smallpox	0	0	0	0	0
Tularemia	2	2	0	3	2
Typhus abdominalis	162	144	131	137	109
Typhus fever	2	0	0	1	0
Viral encephalitis	768	781	1452	887	828
Viral hemorrhagic fever	0	11	6	8	14
Yellow fever	0	0	0	0	1*

(* German tourist infected in Africa, died in Germany)

Form B (i)

Exchange of information on outbreaks of infectious diseases and similar occurences caused by toxins

Animal Diseases (outbreaks)

	1995	1996	1997	1998	1999
African swine fever	0	0	0	0	0
Anthrax	0	0	0	0	0
Aujeszky's disease	79	42	24	14	9
Brucellosis	4	4	5	2	1
Foot and mouth disease	0	0	0	0	0
Hog cholera	52	4	44	11	6
Newcastle disease	28	2	0	0	0
Psittacosis	328	335	343	282	216
Q fever	296	236	197	227	147
Rabies	189	66	32	32	39
Rinderpest	0	0	0	0	0
Sheep pox	0	0	0	0	0
Swine vesicular disease	0	0	0	0	0
Teschen disease	0	0	0	0	0
Tularemia	0	0	0	0	0

Form C

Exchange of information on published results

In 1999 scientific papers relating to research and development for prophylactic and/or protective measures against microbial and biological agents and toxins sponsored by the Federal Ministry of Defence have been published in the following journals:

Appl. Microbiology

Archives of Virology

Berliner and Münchner Tierärztliche Wochenschrift

Clinical and Diagnostic Virology

Clinical Experimental Immunology

Clinical Laboratory

Emerging Infectious Dieseases

Epidemiology and Infection

FEMS Microbiology Letters

Forschungsberichte aus der Wehrmedizin

Hybridoma

Immunol. Letters

Journal of Clinical Microbiology

Journal of Gen. Virology

Journal of Virol. Methods

Tierarztliche Umschau

Veterinary Journal

Veterinary Microbiology

Virus Research

Wehrmedizinische Monatsschrift

Form D

Active Promotion of Contacts

Planned international conferences, symposia, seminars and other similar forums for exchange

Name of the conference	Biological Medical Defence Conference 2000
Arranging organisation	German Armed Forces Medical Academy
Time	25-26th October 2000
Place	München
Main subjects	1. Review of the German Biological Medical Defence Program 2. Principles and measures of the management of biological warfare casualties 3. Objectives of the biological medical defence research and development in Germany
Conditions for Participation	Experts named by States Parties
Point of contact for further information, registration etc.	LtCol Dr. Biederbick Federal Ministry of Defence Office of the Surgeon General (InSan I1) PO Box 1328 D-53003 Bonn, Germany Phone: +49-228-12 6247 Fax: +49-228-12 6689

Form G

Declaration of Vaccine Production Facilities

A. 1. Name of Facility

Chiron Behringwerke GmbH & Co

2. Location (mailing address)

Postfach 1630
D-35006 Marburg

3. General description of the types of diseases covered:
cholera, diphtheria, hepatitis, influenza, meningitis, pertussis, poliomyelitis, rabies, tetanus, tuberculosis, tick-borne encephalitis,

B. 1. Name of Facility

Sächsisches Serumwerk Dresden
Niederlassung der SmithKline Beecham Pharma GmbH

2. Location (mailing address)

Zirkusstr. 40
D-01069 Dresden

3. General description of the types of diseases covered:
influenza, tetanus

HUNGARY

14 April 2000

The Permanent Mission of Hungary to the United Nations presents its compliments to the Department for Disarmament Affairs of the United Nations and has the honour to submit the Declaration of Hungary in accordance with the Final Document of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

Declaration in accordance with the Final Document of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE	NOTES
A, part 1	☐	☑	Annex 1-8.
A, part 2 (i)	☑	☐	
A, part 2 (ii)	☑	☐	
A, part 2 (iii)	☑	☐	
B (i)	☐	☐	Annex 9.
B (ii)	☑	☐	
C	☐	☐	Annex 10.
D	☐	☐	Annex 11.
E	☐	☑	Annex 13.
F	☐	☑	
G	☐	☐	Annex 12.

Date:28 March 2000

HUNGARY

HUNGARY
Annex 1

Measure A, part 1
FORM A

1	Name	NATIONAL CENTER FOR EPIDEMIOLOGY "B. JOHAN" Virological Dpt., Bacteriological Dpt., Bacteriophage Dpt Mycological Dpt., Parasitological Dpt., Immunological Products Control Department.
2	Responsible	MINISTRY OF HEALTH
3.	Address	Budapest Gyáli ut 2-6 1097 Hungary
4	Financed by	MINISTRY OF HEALTH
5.	Number of maximum containment units	None
6	Highest level of protection	P2
7	Scope and general description of activities	For public health purposes: Diagnosis of infectious diseases, control of vaccines, diagnosis of bacterial plasmids, studies on molecular genetic of virulence plasmids and development of nucleic acid probes for detection of herpesvirus, adenovirus and parvovirus B19 infections

HUNGARY
Annex 2

Measure A part 1
FORM A

1	Name	NATIONAL INSTITUTE OF HYGIENE Microbiological Research Group
2	Responsible	MINISTRY OF HEALTH
3	Address	Budapest Pihenő út 1 1529 Hungary
4	Financed by	MINISTRY OF HEALTH
5	Number of maximum Containment units	none
6	Highest level of protection	P3
7	Scope and general descriptin of Activities	For public health purposes. Propagation of HIV-1 and HIV-2 viruses in tissue cultures. Verification of positive HIV-1 and HIV-2 antibody tests

HUNGARY
Annex 3

Measure A, part 1
FORM A

1	Name	CENTRAL VETERINARY INSTITUTE
2	Responsible	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
3	Address	BUDAPEST Tábornok u. 2. 1149 Hungary
4	Financed by	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
5	Number of maximum containment units	None
6	Highest level of protection	a./ primary containment: minimum high b./secondary containment:safely isolated laboratories to work with highly contagious pathogenic microbes.
7	Scope and general description of activities	General diagnostic activities, the verification or exclusion of the existence of certain diseases (foot-and-mouth disease, African swine fever, other vesicular diseases and hog cholera)

HUNGARY
Annex 4

Measure A, part I
FORM A

1	Name	STATE CONTROL INSTITUTE FOR VETERINARY BIOLOGICALS, DRUGS AND FEEDS
2	Responsible	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
3	Address	Budapest Szállás utca 8. 1107 Hungary
4	Financed by	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
5	Number of maximum containment units	None
6	Highest level of protection	P2 (shower-in and –out)
7	Scope and general description of activities	Laboratory control of veterinary biological (vaccines, sera and diagnostic products) for efficacy and safety, in addition laboratory investigations to study some contagious diseases (hog cholera, Newcastle diseases, IBR, anthrax)

HUNGARY
Annex 5

Measure A, part 1
FORM A

1	Name	NATIONAL FOOD INVESTIGATION INSTITUTE
2	Responsible	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
3	Address	Budapest, Mester u. 81, P.O.B. 1740 1475 Hungary
4	Financed by	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
5	Number of maximum containment units	None
6	Highest level of protection	If necessary, P2 level containment can be provided for
7	Scope and general description of activities	control of foodstuff, mainly foods of animal origin for chemical contaminants (residues), radioactive pollutants and microbial contamination with special attention to obligate pathogenic microbes (Salmonellae, Listeria, Yersinia, Clostridia, some serotypes of E. coli, etc.)

HUNGARY
Annex 6

Measure A, part 1
FORM A

1	Name	AGRICULTURAL BIOTECHNOLOGICAL CENTER (ABC)
2	Responsible	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
3	Address	Gödöllő, Szent-Györgyi Albert u. 4. 2101 Hungary
4	Financed by	MINISTRY OF AGRICULTURE AND REGIONAL DEVELOPMENT
5	Number of maximum containment units	None
6	Highest level of protection	Four laboratories in each institute for recombinant DNA work
7	Scope and general description of activities	Research and development in agricultural biotechnology by recombinant DNA techniques.

HUNGARY
Annex 7

Measure A, part 1
FORM A

1	Name	VETERINARY RESEARCH INSTITUTE OF THE HUNGARIAN ACADEMY OF SCIENCES
2	Responsible	HUNGARIAN ACADEMY OF SCIENCES
3	Address	Budapest, Hungária krt. 21. 1143 Hungary
4	Financed by	HUNGARIAN ACADEMY OF SCIENCES
5	Number of maximum containment units	None
6	Highest level of protection	Normal laboratory practice in research with both bacteria and viruses. P2
7	Scope and general description of activities	Research and development in control methods for diseases of domestic animals caused by either infection or parasites.

HUNGARY
Annex 8

Measure A, part 1
FORM A

1	Name	BIOLOGICAL RESEARCH CENTER OF THE HUNGARIAN ACADEMY OF SCIENCES
2	Responsible	HUNGARIAN ACADEMY OF SCIENCES
3	Address	Szeged, Temesvári krt. 62. 6701 Hungary
4	Financed by	HUNGARIAN ACADEMY OF SCIENCES
5	Number of maximum containment units	None
6	Highest level of protection	P2
7	Scope and general description of activities	5 institutes: Biophysics, Biochemistry, Enzimology, Genetics, Plant Biology

HUNGARY
Annex 9

Measure B
FORM B

Background information on outbreaks of reportable infectious human diseases

Diseases	number of cases in 1998
AIDS	36#
Amoebiasis	144
Brucellosis	3
Campylobacteriosis	9232
Dyspepsia Coli	190
Echinococcosis	6
Encephalitis infectiosa	65
Enteritis infectiosa	13879
Haemorrhagic fever (Virus)	11
Hepatitis infectiosa	1668
Keratoconjuctivitis epidemica	89
Legionellosis	18
Leptospirosis	37
Listeriosis	23
Lyme disease	1092
Malaria	16*
Meningitis epid	26
Meningitis purulenta	156
Meningitis serosa	315
Mononucleosis infectiosa	1300
Morbilli	23#
Ornithosis	4
Paratyphus	2
Parotitis epidemica	240
Q-fever	1
Rubeola	125
Salmonellosis	18107
Scarlatina	6550
Shigellosis	645
Staphylococcosis	18
Strongyloidosis	7
Taeniasis	7
Tetanus	12
Tickencephalitis	84
Toxoplasmosis	280
Trachoma	1
Trichinellosis	3
Tularemia	89
Varicella	40209
Yersiniosis	176

Notice: #: including imported cases
*: imported cases

The appearance of infectious diseases show no deviation from the normal pattern

HUNGARY
Annex 19

LIST OF PUBLICATION

PUBLICATION LIST 1998-1999

1. ANDO,I. (1998) The use of cell surface antigens to define functional subsets of *Drosophila* hemocytes. In: 39th Annual Drosophila Research Conference, Immunity workshop, Washington DC
2. ANDO,I., KURUCZ,E., [illegible], [illegible], CARTON,Y., HULTMARK,D. (1998) Functionally distinct compartments of *Drosophila* hemocytes: an immunological approach. In: 39th Annual Drosophila Research Conference: "Apoptosis and Immunity" session, Washington DC
3. ANDREI,L., VENETIANER,A.: Heat Resistance in Mammalian Cells: Lessons and Challenges (1998) ANN. OF THE NEW YORK ACADEMY OF SCIENCES 851 : 369-378
4. APPEL,S.H., ENGELHARDT,J.I., SIKLOS,L., SMITH,R.G., MOSIER,D., ALEXIANU,M., HABIB,M.: Amyotrophic lateral sclerosis: immune-initiated increased intracellular calcium and motor neuron injury. In: IMMUNOTHERAPY IN NEUROIMMUNOLOGIC DISEASES (eds: J. Zhang, D. Hafler, R. Hohlfeld, A. Miller) Martin Dunitz Ltd., Malden, Winnipeg, Sao Paulo, pp 95-109. (1998)
5. APPEL,S.H., SIKLOS,L., ALEXIANU,M., COLOM,L., HO,B.K., MOHAMED,A.H., MOSIER,D., SMITH,R.G.: Immune mediated injury in motoneurons in ALS. In: AMYOTROPHIC LATERAL SCLEROSIS: Progress and perspectives in basic research and clinical application (1996) (eds. Nakano I., Hirano A.) Elsevier, Amsterdam, Lausanne, New York, Oxford, Shannon, Tokyo, pp 184-191
6. BACHRATI,C.Z., DOWNES,C.S., RASKO,I. (1998) Az S-fázisos ellenőrzőpont a rágcsálósejtek transzformálódása során. 3. Magyar Biokémiai Egyesület Molekuláris Biológiai Szakosztálya 3. Munkaértekezlete, Sárospatak, május 11-14
7. BACHRATI,C., SOMODI,Z., ENDREFFY,E., KALMAR,L., RASKO,I.: Carrier detection by microsatellite analysis in Duchenne/Becker muscular dystrophy in Hungarian families. (1998) ANNALS OF HUMAN GENETICS 62: 515-520
8. BAGYINKA,CS., KOVACS,K.L.: Fast redox-state-induced absorption changes in cytochrome c and hydrogenase from *T. roseopersicina*. Proc. COST Workshop "Bacterial Hydrogenases - Structures and Mechanisms", Sintra, Portugal, p. 18, 1998
9. BAKOS,E., EVERS,R., SZAKACS,G., TUSNADY,G.E., WELKER,E., SZABO,K., HAAS,M.DE, DEEMTER,L.VAN, BORST,P., VARADI,A., SARKADI,B.: Functional multidrug resistance protein (MRP1) lacking the N-terminal transmembrane domain. (1998) J. BIOL. CHEM. 273: 32167-32175

10. BAKOTA,L., SZIKRA,J., TOTH,G., GULYA,K.: Slide-binding characterization and autoradiographic localization of delta opioid receptors in rat and mouse brains with the tetrapeptide antagonist [3H]TIPP. (1998) LIFE SCIENCES 63 : 1377-1385
11. BALO, B., HIDEG, E., VARADI, GY. AND VASS, I. (1998) "Damage of grapevine leaf photosynthesis by UV-B (280-320 nm) radiation in two cultures of *Vitis vinifera*" IN : PHOTOSYNTHESIS: MECHANISMS AND EFFECTS (Garab, G. ed.), Kluwer Academic Publishers, Amsterdam, pp. 2389-2392
12. BANYAI,L., PATTHY,L.: Amoebapore homologs of caenorhabditis elegans. (1998) BIOCHIM BIOPHYS ACTA 1429 : 259-264
13. BARABAS,K.N., SZEGLETES,Z., PESTENACZ,A., FULOP,K., ERDEI,L.: Effects of excess UV-B irradiation on the antioxidant defence mechanisms in wheat (Triticum aestivum L.) seedlings. (1998) JOURNAL OF PLANT PHYSIOLOGY, 153 : 146-153
14. BERCZI,A., MOLLER,I.M.: Characterization and solubilization of residual redox activity in salt-washed and detergent-treated plasma membrane vesicles from spinach leaves. (1998) PROTOPLASMA 205 : 59-65
15. BERCZI,A., MOLLER,I.M.: NADH-monodehydroascorbate oxidoreductase is one of the redox enzymes in spinach leaf plasma membranes. (1998) PLANT PHYSIOL. 116 : 1029-1036
16. BERCZI,A., VAN GESTELEN,P., PUPILLO,P.: NAD (P) H-utilizing flavoenzymes in the plant plasma membrane. In: PLASMA MEMBRANE REDOX SYSTEMS AND THEIR ROLE IN BIOLOGICAL STRESS AND DISEASE (1998) (Asard, H., Bérczi, A., Caubergs, R., eds.), pp. 33-68, Kluwer Acad. Publ., Amsterdam.
17. BIANCHETTI,M., ZHELEVA,D., DEAK,Z., ZHARMUHAMEDOV,S., KLIMOV,V., NUGENT,J., VASS,I., BARBER,J.: Comparison of the functional properties of the monomeric and dimeric forms of the isolated CP47-reaction center complex. (1998) J. BIOL. CHEM. 273 : 16128-16133
18. BOCSKEI,Z., FUXREITER,M., NARAY-SZABO,G., SZABÓ,E., POLGAR,L.: Crystallization and preliminary X-ray analysis of porcine muscle prolyl oligopeptidase. (1998) ACTA CRYSTALLOGR. D54 : 1414-1415
19. BODROSSY,L., MURRELL,J.C., KOVACS,K.L., RAKHELY,G.: Hydrogenases in methanotrophs and their biotechnological potential. Poster presented at the 8th International Congress on Biotechnology, Budapest, Hungary, 17-21 August 1998
20. BODROSSY,L., HOLMES,E.M., HOLMES,A.J., KOVACS,K.L., MURRELL,J.C.: A novel genus of thermophilic and thermotolerant methane oxidisers. Poster presented at the 8th International Congress on Biotechnology, Budapest, Hungary, 17-21 August 1998
21. BOROS IMRE: A Magyar Biokémiai Egyesület Molekuláris Biológia Szakosztályának 3. Munkaertekezletéről. BIOKÉMIA XXII. évfolyam 3. szam (1998. szeptember) 71-73.
22. BORTOLIN,M.L., KISS,T.: Human U19 intron-encoded snoRNA is processed from a long primary transcript that possessed little potential for protein coding (1998) RNA 4 : 445-454
23. BUCHEL,C., GARAB,G.: Molecular organisation of the chlorophyll a/c light - harvesting complex of Pleurochloris meiringensis (Xanthophyceae). Pigment binding and secondary structure of the protein (1998) J. OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B 42 : 191-194
24. BUCHEL,C., GARAB,G.: Organisation of pigment molecules in the thylakoids and the chlorophyll a/c light-harvesting complex of a xanthophyte alga, Pleurochloris

meiringensis A linear dichroism study (1998) J. OF PHOTOCHEM. AND PHOTOBIOL. B 44 199-204

25 BUCHEL C, ZSIROS,O, GARAB,G. Alternative cyanide-sensitive oxidase interacting with photosynthesis in Synecocystis PCC6803. Ancestor of the terminal oxidase of chlororespiration" (1998) PHOTOSYNTHETICA 35(2) 223-231

26 CATUCCI, L., DORNER, W., HANKAMER, B., VASS, I. AND BARBER, J. (1998) "Isolatioon and characterisation of oxygen evolving PSII complexes of spinach in the presence of glycine betaine" IN : PHOTOSYNTHESIS: MECHANISMS AND EFFECTS (Garab, G. ed.), Kluwer Academic Publishers, Amsterdam, pp. 973-976

27 CHARRIER,B, TRINH,T.H, POIRIER,S, KONDOROSI,A, RATET,P Flavanone hydroxylase (F3H) expression and flavonoid localization in nodules of three legume plants reveal distinct tissue specificities (1998) MOL. PLANT-MICROBE INTERACT 11 924-932

28 CHEN,S, LE,W.D, XIE,W.J, ALEXIANU,M.E, ENGELHARDT,J.I., SIKLOS,L, APPEL,S.H. Experimental destruction of substantia nigra initiated by Parkinson's disease immunoglobulins (1998) ARCHIVES OF NEUROLOGY 55 1075-1080

29 CHITU,V., TOTH,G., SZEKELY SZUCS, K., HEGEDUS, Z., MONOSTORI, E (1998) A T sejt receptor lancabol szarmazo szintetikus foszfo-peptidek hatasa a korai jelatviteli folyamatokra permeabilizalt T-limfocitákban. A Magyar Biokemiai Egyesulet Molekularis Biológiai Szakosztálya 3. Munkaertekezlete Sarospatak, majus 11-14

30 COOK,D.R, KIM,D, NAM,Y-W, PENMETSA,R.V, RAMU,S, UHM,T, ENDRE,G, KALO,P, KISS,G.B Development and application of tools for genome analysis in *Medicago truncatula* PLANT AND ANIMAL GENOME CONFERENCE VI San Diego, CA,USA "Book of Final Program and Abstract Guide" W86, p49

31 CORDONE,L, GALAJDA,P, VITRANO,E, GASSMANN,A OSTERMANN,A PARAK,F A reduction of protein specific motions in co-ligated myoglobin embedded in a trehalose glass (1998) EUR. BIOPHYS. J. 27 173-176

32 CRESPI M., JOHANSSON C., FRUGIER F., POIRIER S., SOUSA C., KONDOROSI A. Classical and novel growth regulators acting during nodule initiation In: NITROGEN FIXATION FOR THE 21ST CENTURY, Eds. Elmerich C., Kondorosi A., Newton W. E., Kluwer Acad. Publ., Dordrecht, pp 221-222, 1998

33 CSEH, Z, PAPP, E, GARAB, GY. Model calculations on the mechanism of the light-induced structural changes in lamellar aggregates of LHC II (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS, Ed. GARAB,G. KLUWER ACADEMIC PUBL., DORDRECHT pp 345-348

34 CSERPAN,I, MATHE,E, PATTHY,A, UDVARDY,A Characterization of a Drosophila phosphorylation-dependent nuclear-localization-signal-binding protein (1998) BIOCHEM. J. 328 821-826

35 CSONT,T, PAL , SZILVASSY,Z, FERDINANDY,P Lack of correlation between myocardial nitric oxide and cyclic guanosine monophosphate content in both nitrate-tolerant and nontolerant rats (1998) BIOCHEM. PHARMACOL. 56 1139-1144

36 DAMJANOVICH,S, MATKO,J, MATYUS,L, SZABO,G JR., SZOLLOSI,J, PIERI,J C, FARKAS,T, GASPAR,R JR Supramolecular receptor structures in the plasma membrane of lymphocytes revealed by flow cytometric energy transfer,

scanning force- and transmission electron-microscopic analyses (1998) CYTOMETRY 33 : 225-233

37 DARULA,Z, TÖRÖK G, WITTMANN,G, MANNEKENS,E, VERBEKE,K, TÓTH,G, TOURWE,D, PETER,A : A rapid qualitative thin-layer chromatographic method for separation of enantiomers of unusual aromatic amino acis (1998) J. PLANAR CHROMATOGRAPHY 11 : 346-349

38 DE JONG,G., TELENIUS,A.H, TELENIUS,H, PEREZ,C.F, HADLACZKY,G (1998) Large-scale isolation and purification of mammalian artificial chromosomes. In: XIX. Congress of the International Society for Analytical Cytology, Colorado Springs, CO Feb 28-Mar 5.

39 DÉR,A, RAMSDEN J.J : Evidence for loosening of a protein mechnism. (1998) NATURWISSENSCHAFTEN 85 : 353-355

40 DOBRIKOVA, A, SIMIDJIEV, I, GARAB, GY, PETKAMCHIN, I, TANEVA S.G: Electro-optical investigation of LHC II macroaggregates. (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS. Ed. GARAB,G. KLUWER ACADEMIC PUBL., DORDRECHT pp 321-324

41 DOSZTANYI,Z, SIMON,I : Stabilization centers in various proteins. (1998) THEOR. CHEM. ACC. DOI 10.1007/s00214980m123

42 DOWNIE J. A., KONDOROSI A. Interactions in the Rhizobium-legume symbiosis. In: NITROGEN FIXATION FOR THE 21ST CENTURY, Eds Elmerich C., Kondorosi A., Newton W. E., Kluwer Acad. Publ., Dordrecht, pp 207-208, 1998.

43 DUDITS,D, MAGYAR,Z, DEAK,M, MESZAROS, T, MISKOLCZI, P, FEHER, A, BROWN, S, KONDOROSI, E, ATHANASIADIS, A, PONGOR, S, BAKO, L, KONCZ, CS, AND GYÖRGYEY, J: Cyclin-dependent and calcium-dependent kinase families: response of cell division cycle to hormone and stress signals. (1998) IN : PLANT CELL DIVISION: MOLECULAR AND DEVELOPMENTAL CONTROL, EDS D. FRANCIS, D. DUDITS AND D. INZÉ, PORTLAND PRESS, LONDON pp 21-46

44 DUSHA, I., KISS, E., GYÖRGYPAL, Z., OLÁH, B., KONDOROSI, A. (1998) The efficiency of symbiosis is modulated by the nitrogen-controlled nodulation and invasion functions of the bacterial partner. In: Third European Nitrogen Fixation Conference, Lunteren- The Netherlands, p 28

45 ELMERICH C., KONDOROSI A., NEWTON W. E. Biological Nitrogen Fixation for the 21st Century. Kluwer Academic Publishers, Dordrecht, 708 pages, 1998

46 ENDRE,G, SZAKAL,B, KALÓ,P, KISS,P, KISS,G.B : (1998) Egy szimbiotikus (Nod-) lucerna mutáns genetikai térképezése. A Magyar Biokémiai Egyesület Molekuláris Biológiai Szakosztályának 3. Munkaértekezlete, Sárospatak. Programfüzet CP-2, p 53

47 ENDRE,G, SZAKÁL,B, KISS,P, KEVEI,Z, KISS,G.B : (1998) Genetic mapping of a gene conditioning non-nodulation phenotype in alfalfa. THIRD EUROPEAN NITROGEN FIXATION CONFERENCE, LUNTEREN, The Netherlands. Book of Program and Abstracts L29, p 36

48 ERDEI,L, SZEGLETES,Z, BARABAS,K.N, PESTENACZ,A, FULOP,K, KALMAR,L, KOVACS,A, TOTH,B, DER,A : Environmental stress and the biological clock in plants: changes of rhythmic behavior of carbohydrates, antioxidant enzymes and stomatal resistance by salinity. (1998) JOURNAL OF PLANT PHYSIOLOGY, 152 : 265-271

49 FABIAN,G, SZABÓ,C.A, BOZÓ,B, GREENWOOD,J, ADAMSON,P, DELI,M.A, JOO,F, KRIZBAI,I.A, SZUCS,M : Expression of G-protein subtypes in cultured cerebral endothelial cells. (1998) NEUROCHEM. INT. 33 : 179-185

50 FALUS,A. VARADI,A. RASKO,I.: The DNA-chip: a new tool for medical genetics (in Hung.) Az orvosi genetikai diagnosztika uj eszköze: a DNS-Chip (1998) ORV. HETILAP 139: 957-960

51 FARKAS,G. MARTON,J. NAGY,S. MANDI,Y. TAKACS,T. DELI,M.A. ABRAHAM,C.S.: Experimental acut pancreatitis results in increased blood-brain barrier permeability in the rat: a potential role for tumor necrosis factor and interleukin 6. (1998) NEUROSCIENCE LETTERS, 242 : 147-150

52 FATYOL,K, ILLES,K, PRAZNOVSZKY,T, LANGRIDGE,W.H, HADLACZKY,G, SZALAY,A.A.: Molecular characterization of a stably transformed Bombyx mori cell line: identification of alternative transcriptional initiation sites of the A3 cytoplasmic actin gene. (1998) MOL. GEN. GENET. 260 : 1-8

53 FEHER, A, SCHULTZE, M, AND KONDOROSI, E: Control of Nod-signal-induCed Cell divisions during root nodule formation. (1998) IN PLANT CELL DIVISION: MOLECULAR AND DEVELOPMENTAL CONTROL, EDS D. FRANCIS, D. DUDITS AND D. INZE, PORTLAND PRESS, LONDON pp 223-242

54 FEJES, E AND NAGY, F: Molecular analysis of circadian clock-regulated gene expression in plants: features of the 'output' pathways. (1998) BIOLOGICAL RYTHMS AND PHOTOPERIODISM IN PLANTS EDS. P.J. LUMSDEN AND A.J. MILLAR 1998 BIOS SCIENTIFIC PUBLISHERS LTD, OXFORD pp 99-

55 FELLE,H.H, KONDOROSI,E, KONDOROSI,A, SCHULTZE,M.: The role of ion fluxes in Nod factor signalling in Medicago sativa. (1998) PLANT J., 13 : 455-463

56 FISCHER,D.J, LILIOM,K, GUO,Z, NUSSER,N, VIRAG,T, MURAKAMI-MUOFUSHI,K, KOBAYASHI,S, ERICKSON,J.R, SUN,G, MILLER,D.D, TIGYI,G.: Naturally occurring analogs of lysophosphatidic acid elicit different cellular responses through selective activation of muntiple receptor subtypes. (1998) MOLECULAR PHARMACOL 54 : 979-988

57 FONSECA,M.J, JUVEACUTE,A, LORINCZ,Z REIG,F, ALSINA,M.A.: Psychochemical study of hydrophobic derivatives of collagen fragments (1998) J.COLLOID INTERF.SCI. 205 : 141-148

58 FRUGIER,F, KONDOROSI,A, CRESPI,M.: Identifaction of novel putative regulatory genes induced during alfalfa nodule development with a cold-plaque screening procedure. (1998) MOL. PLANT-MICROBE INTERACT 11 : 358-366

59 FULOP,V, BOCSKEI,Z, POLGAR,L.: Prolyl oligopeptidase: An unusual betapropeller domain regulates proteolysis. (1998) CELL 94 : 161-170

60 GAL,P, ZAVODSZKY,P.: Structure and function of the serine-protease subcomponents of C1 Protein engineering studies (1998) IMMUNOBIOLOGY 199 : 317-326

61 GARAB, GY, ISTOKOVICS,A, BUTIUC, A, SIMIDJIEV, I, DER, A: Light-induced ion movements in thylakoid membranes and isolated LHC II. (1998) IN PHOTOSYNTHESIS: MECHANISMS AND EFFECTS, Ed. GARAB,G, KLUWER ACADEMIC PUBL., DORDRECHT pp 341-344

62 GILBERT, M., SASS, L. VASS, I. AND WILHELM, C. (1998) "Effects of UV-B radiation in Pheodactylum tricornutum (Bacillariophyace) and Scenedesmus obliqus (Chlorophyace): A thermoluminescence study" IN : PHOTOSYNTHESIS MECHANISMS AND EFFECTS. (Garab, G. ed.), Kluwer Academic Publishers, Amsterdam, pp. 2377-2380

63 GINZBERG,I. STEIN,H, KAPULNIK,Y, SZABADOS,L, STRIZHOV,N, SCHELL,J, KONCZ,C, ZILBERSTEIN,A.: Isolation and characterization of two

different cDNAs of 1-pyrroline-5-carboxylate synthase in alfalfa: transcriptionally induced upon salt stress. (1998) PLANT MOLECULAR BIOLOGY 38 : 755-764

64 GOGOS,J.A, MORGAN,M, LUINE,V, SANTHA,M, OGAWA,S, PFAFF,D, KARAYIORGOU,M : Catechol-O-methyltransferase-deficient mice exhibit sexually dimorphic changes in catecholamine levels and behavior. (1998) PROC NATL. ACAD. SCI. USA , 95 : 9991-9996

65 GOMBOS, Z, KIS, M, ZSIROS, O, UGHY, B, VARKONYI, ZS, WADA, H, FARKAS, T, NAGY, F: Light induction of lipid desaturation and its role in acclimation to low temperature. (1998) IN: PHOTOSYNTHESIS MECHANISMS AND EFFECTS, Ed. GARAB,G, KLUWER ACADEMIC PUBL., DORDRECHT pp 1783-1786

66. GOMBOS, Z, KIS, M, ZSIROS, O, UGHY, B, VARKONYI, ZS, WADA, H, TASAKA, Y, FARKAS, T, MURATA, N: Light-induced desaturation and its role in acclimation to low temperature (1998) IN: ADVANCES IN PLANT LIPID RESEARCH (EDS: SANCHEZ, J, CERDA-OLMEDO, E, MARTINEZ-FORCE, E) UNIV. DE SEVILLA, SPAIN pp 118-121

67 GOMBOS, Z, TASAKA, Y, MURATA, N: The role of polyunsaturated glycerolipids in low-temperature stress; studied by genetically engineered cyanobacterial strains. (1998) IN CYANOBACTERIAL BIOTECHNOLOGY (EDS: SUBRAMANIAN, G, KAUSHIK, B.D, VENKTATARAMAN, G.S), OXFORD & IBH PUBL. NEW DELHI, pp 43-49

68 GOMBOS,Z, MURATA,N: Genetical engineering of the unsaturation of glycerolipids, Its effects on the ability of the photosynthetic machinery to tolerate temperature stress. (1998) IN: LIPIDS IN PHOTOSYNTHESIS: STRUCTURE, FUNCTION AND GENETICS, SIEGENTHALER, P-A & MURATA, N (EDS) KLUWER ACADEMIC PUBLISH THE NEDERLANDS, pp 249-262

69 GULYÁS, E.C., SOÓS, K., VARGA, J., PENKE, B., TÓTH,G. (1998): Synthesis and tritium labelling of -amyloid(31-35) and -amyloid(25-35) peptides. In SYNTHESIS AND APPLICATIONS OF ISOTOPICALLY LABELLED COMPOUNDS (Eds. Heys,J.R. and Melillo,D.G.), John Wiley & Sons Ltd. 467-470

70 GULYÁS, E.C., TÓTH, G. (1998): Tritium labelling of deltorphin'II in Val5 and D-Ala2-Leu5-enkephalin in D-Ala2 residues. In: SYNTHESIS AND APPLICATIONS OF ISOTOPICALLY LABELLED COMPOUNDS (Eds. Heys,J.R. and Melillo,D.G.), John Wiley & Sons Ltd. 341-344

71 GULYAS,E.C, SOÓS,K,VARGA,J, TÓTH,G, PENKE,B : Synthesis of tritium-labelled -amiloid fragments. (1998) J. LAB. COMP. AND RADIOPHARMACEUT. XLI: 763-771

72 GYORFI,K, BARNA,F, BAGYINKA,C, RAKHELY,G, KOVACS,K.L : Biohidrogén: Kiut az energetika zsákutcájából. (1998) ELET ES TUDOMANY 53 195-197 (in Hungarian)

73 GYÖRGYEY,J, ROUDIER,F, KISS,E, FEHÉR,A, DUDITS,D, KONDOROSI,A, KONDOROSI,E (1998) Interacting protein partners of cycMs3 which is activated during the initiation of symbiotic root nodule format ion in alfalfa. In: IX INTERNATIONAL CONGRESS ON PLANT TISSUE AND CELL CULTURE, Jerusalem, June 14-19, pp. 148

74 HAJOS,J.P, ZUIDEMA,D, KULCSAR,P, HELDENS,J.G.M, ZÁVODSZKY,P, VLAK,J.M : Recombination of baculovirus DNA following lipofectin of insect larvae (1998) ARCH VIROL 143 : 2045-2050

75 HAMANN,J, SORTELERS,C, KISS-TOTH,E, VOGEL,B, EICHLER,W, LIER,R.A.W VAN : Characterisation of the CD55 (DAF)-binding site in the

seven-span transmembrane receptor CD97. (1998) EUR. J. IMMUNOLOGY 28 : 1701-1707

76 HARWOOD, J.L., VIGH, L. (1998). Membranes in stress and adaptation. In: STRESS OF LIFE FROM MOLECULES TO MAN (Ed.: P. Csermely) The New York Academy of Sciences, New York, pp. 162-168

77 HEGEDUS,Z. CHITU,V. TOTH,G.K. FINTA,S. VARADI,G. ANDO,I. MONOSTORI,E. : Contribution of kinases and the CD45 phosphate to the generation of the thyrosin phosphorylation patterns in the TCR chain. (1998) IMMUNOLOGY LETTERS 64 : 3

78 HEVER-SZABO,A. PIRITYI,M. SZATHMARI,M. VENETIANER,A. : P-Glycoprotein is Overexpressed and Functional in Severely Heat-Shocked Hepatoma Cells. (1998) ANTICANCER RESEARCH 18 : 3045-3048

79 HIDEG, E., KALAI, T., HIDEG, K. AND VASS, I. (1998) "Detecting singlet oxygen production in leaves under stress" IN : PHOTOSYNTHESIS: MECHANISMS AND EFFECTS. (Garab, G. ed.), Kluwer Academic Publishers, Amsterdam, pp. 2139-2142

80 HIDEG,E. KALAI,T. HIDEG,K. VASS,I. *Photoinhibition of photosynthesis in vivo results in singlet oxygen production detection via nitroxide-induced fluorescence quenching in broad bean leaves.* (1998) BIOCHEMISTRY 37 : 11405-11411

81 HIRIPI,L. NAGY,L. KALMAR,T. KOVACS,A. VOROS,L. : *Insect (Locusta migratoria migratorioides) test monitoring the toxicity of cyanobacteria.* (1998) NEUROTOXICOLOGY 19 : 605-8

82 HORVATH,I. GLATZ,A. VARVASOVSZKI,V. TOROK,Z. PALI,T. BALOGH,G. KOVACS,E. *NADASDI,L. BENKO,S. JOO,F.* VIGH,L. : Membrane physical state controls the signaling mechanism of the heat shock response in *Synechocystis* PCC 6803: identification of *hsp17* as a "fluidity gene". (1998) PROC. NATL. ACAD. SCI. USA 95 : 3513-3518

83 *HORVATH,V.G. PETTKO-SZANDTNER,A.* NIKOVICS,K. BILGIN,M. BOULTON,M. DAVIES,J.W. GUTIERREZ,C. DUDITS,D. : Prediction of functional regions of the maize streak virus replication-associated proteins by protein-protein interaction analysis. (1998) PLANT MOLECULAR BIOLOGY 38 : 699-712

84 IMADA,K. VONDERVISZT,F. FURUKAWA,Y. OOSAWA,K. NAMBA,K. Assembly characteristics of flagellar CAP protein HAP2 of Salmonella : decamer and pentamer in the pH-sensitive equilibrium (1998) J.MOL. BIOL. 277 : 883-891

85 IVANENKO, T., HEITMAN, J., KISS, A. Mutational analysis of the function of Met137 and Ile197, two amino acids implicated in sequence-specific DNA recognition by the *Eco*RI endonuclease. (1998) BIOLOGICAL CHEMISTRY 379 : 459-465

86 IVANYI,B. HASZON,I. ENDREFFY,E. SZENOHRADSZKY,P. PETRI,I.B. KALMAR,T. BUTKOWSKI,R.J. CHARONIS,A.S. TURI,S. : Childhood membraneous neuropathy, circulating antibodies to the 58-kD TIN antigen, and anti-tubular basement membrane nephritis : an 11-year follow-up. (1998) AM J KIDNEY DIS 32 : 1068-1074

87 JAVORFI, T., AMENITSCH, H., LAGGNER, P., CSEH, Z., MUSTARDY, L., BORBELY, S., ROSTA, L., GARAB, GY. Nature of irreversible structural changes induced by intense light in thylakoids. Small angle X-ray and neutron scattering of magnetically aligned chloroplasts. (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS, Ed. GARAB,G. KLUWER ACADEMIC PUBL., DORDRECHT pp 349-352

88 JEKELY,G. Caspases: The cell death proteases. (1998) NEURAL NOTES 4 : 2-4

89 JEKELY,G. Teleologikus pókhálók. TERMESZETTUD.KOZL. 129 : (1998) 571

90 JHUTTI,C.S., JAVORFI,T., MERZLYAK, M.N., NAQVI, K.R. Triplet-triplet absorption spectra and extinction coefficients of lutein, neoxanthin and violaxanthin. (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS. Ed. GARAB,G., KLUWER ACADEMIC PUBL., DORDRECHT pp 491-494

91 JUHASZ,A., KALMAN,J., CSASZAR,A., KANKA,A., RIMANOCZY,A., JANKA,Z., RASKO,I. : Apolipoprotein E polymorphism in vascular dementia (1998) CLIN. NEUROSCI. suppl. 51 : 52.

92 JUHASZ,A., KALMAN,J., RASKO,I., JANKA,Z. : Apolipoprotein E allele frequencies in expressive language disorder. (1998) CLIN. NEUROSCI. suppl. 51 : 53.

93 KALAI,T., HIDEG,E., VASS,I., HIDEG,K.: Double (fluorescent and spin) sensors for detection of reactive oxygen species in the thylakoid membrane. (1998) FREE RADICAL BIOLOGY & MEDICINE 4 : 649-652

94 KALO,P., ENDRE,G., KISS,P., ELLIS,T.H.N., KISS,G.B. (1998) A lucerna (*Medicago sativa*) és a borsó (*Pisum sativum*) genetikai térképének összehasonlítása. A Magyar Biokémiai Egyesület Molekuláris Biológiai Szakosztályának 3. Munkaértekezlete, Sárospatak. Programfüzet CP-5, p 56

95 KATAROVA,Z., MUGNAINI,E., SEKERKOVA,G., MANN,J.R., ASZODI,A., BOSZE,Z., GREENSPAN,R., SZABO,G.: Regulation of cell-type specific expression of *lacZ* by the 5'-flanking region of mouse GAD67 gene in the central nervous system of transgenic mice. (1998) EUR. J. NEUROSCI. 10 : 989-999

96 KELE,Z., JANAKY,T., MESZAROS,T., FEHER,A., DUDITS,D., SZABO,P.T.: Capillary chromatography/microelectrospray mass spectrometry used for the identification of putative cyclin-dependent kinase inhibitory protein in *Medicago* (1998) RAPID COMMUN. MASS SPECTRUM 12 : 1564-1568

97 KELLY,M.D.W., HILL,R.G., BORSODI,A., TÓTH,G., KITCHEN,I.: Weaning-induced development of delta-opioid receptors in rat brain: differential effects of guanine nucleotides and sodium upon ligand-receptor recognition. (1998) BR. J. PHARMACOL. 125 : 979-986

98 KERESZT,A., KISS,E., REUHS,L.B., CARLSON,W.R., KONDOROSI,A., PUTNOKY,P.: Novel *rkp* gene clusters of *Sinorhizobium meliloti* involved in capsular polysaccharide production and invasion of the symbiotic nodule: the *rkpK* gene encodes a UDP-glucose dehydrogenase. (1998) JOURNAL OF BACTERIOLOGY 180 : 5426-5431

99 KERTESZ,I., BALBONI,G., SALVADORI,S., LAZARUS,L.H., TOTH,G.: Synthesis of 2',6'-dimethyltyrosine containing tritiated delta opioid-receptor selective antagonist dipeptide ligands with extraordinary affinity. (1998) J. LAB. COMPD. RADIOPHARM. XLI : 1083-1091

100 KEVEI,Z., ENDRE,G., KALO,P., KUSTER,H., FRUHLING,M., KONDOROSI,E., KISS,G.B., KONDOROSI,A. (1998) Nodule-specific glycine-rich proteins in Medicago sativa. THIRD EUROPEAN NITROGEN FIXATION CONFERENCE, Lunteren, The Netherlands. Book of "Program and Abstracts P 64", p 134

101 KIS,M., ZSIROS,O., FARKAS,T., WADA,H., NAGY,F., GOMBOS,Z.: Light-induced expression of fatty acid desaturase genes. (1998) PROC. NATL. ACAD. SCI. USA 95 : 4209-4214

102 KISS, E., KERESZT, A., REUHS, B., CARLSON, R., KONDOROSI, A., PUTNOKY, P. (1998) Analysis of the Rkp-3 gene cluster involved in capsular

polysaccharide production in *Rhizobium meliloti*. IN: THIRD EUROPEAN NITROGEN FIXATION CONFERENCE, Lunteren- The Netherlands, p. 103

103 KISS,E., MERGAERT,P., OLAH,B., KERESZT,A., STAEHELIN,C., DAVIES,A.E., DOWNIE,J.A., KONDOROSI,A., KONDOROSI,E. : Conservation of nolR in the Sinorhizobium genera of the Rhizobiaceae family. (1998) MOL PLANT-MICROBE INTERACT 11 : 1186-1195

104 KISS,G.B. : Genetic mapping of Alfalfa (*Medicago sativa*) (1998) Invited Formal Seminar by the University of Minnesota

105 KISS,G.B, KALO,P, CSANADI,G, KISS,P, KERESZT,A, ENDRE,G Construction of an improved genetic map of alfalfa (*Medicago sativa*) (1998) PLANT AND ANIMAL GENOME CONFERENCE, VI. San Diego, CA, USA; "Book of Final Program and Abstracts Guide" P244, p 139

106 KISS,G.B, KERESZT,A, KISS,P, ENDRE,G. : Colormapping: a non-mathematical procedure for genetic mapping. (1998) ACTA BIOLOGICA HUNGARICA 49 : 47-64

107 KISS-LASZLO,Z, HENRY,Y, KISS,T. : Sequence and structural elements of methylation guide snoRNAs essential for site-specific ribose methylation of pre-rRNA. (1998) EMBO J. 17 : 797-807

108 KLEIN,I, TORDAI,A, NEMES,L, SAS,G, VARADI,A. : Indirekt módszerek a haemophilia A genetikai diagnosztikájában. (1998) ORVOSI HETILAP 139 : 487-491

109 KLEIN,I, VARADI,A. : Genvadaszat. (1998) TERMESZET VILAGA 129 : 230-231

110 KNAPP,P.E, MADERSPACH,K, HAUSER,K.F : Endogenous opioid system in developing normal and Jimpy oligodendrocytes : mü and kappa opioid receptors mediate differential mitogenetic and growth responses. (1998) GLIA 22 : 189-201

111 KOLAR,C, FEJES,E, ADAM,E, SCHAFER,E, KAY,S, NAGY,F. : Transcription of *Arabidopsis* and wheat *Cab* genes in single tobacco transgenic seedlings exhibits independent rythms in a developmentally regulated fashion. (1998) THE PLANT J. 13 : 563-569

112 KONCZ,C. : *BRI1* codes for a LRR receptor kinase: cross-talk between brassinosteroids and pathogenic signalling? (1998) TRENDS PLANT SCI. 3 : 1-2

113 KONDOROSI A., CHARON C., FRUGIER F., FOUCHER F., BALLAND M., ROUDIER F., JOHANSSON C., CEBOLLA A., SOUSA C., JIMENEZ-ZURDO J. I., MERGAERT P., STAEHELIN C., SCHULTZE M., CRESPI M., KONDOROSI E., FELLE H. The role of NOD factors in root nodule organogenesis. In: Perspectivas de la Fijacion Biologica de Nitrogeno, eds. Arrese-Igor C., Royuela M., Aparicio Tejo P. M., Publ. University of Navarra, pp., 3-10, 1998

114 KONDOROSI E., TRINH H., ROUDIER F., FOUCHER F., VAUBERT D., CEBOLLA A., LODEIRO A., FEHER Z., KELEMEN Z., GYORGYEY J., MERGAERT P., KERESZT A.,DUDITS D., HIRT H., KONDOROSI A. Nod factor-induced cell cycle activation in root cortical cells. In: Nitrogen Fixation for the 21st Century. Eds. Elmerich C., Kondorosi A., Newton W. E., Kluwer Acad Publ., Dordrecht, pp. 189-192, 1998

115 KONDOROSI, E., CEBOLLA, A., FOUCHER, F., ROUDIER, F., VINARDELLE, J.M., OLAH, B., KISS, E., GYORGYEY, J., MERGAERT, P., VAUBERT, D., KONDOROSI, A. (1998) Regulation of cell cycle during nodule organogenesis. IN: THIRD EUROPEAN NITROGEN FIXATION CONFERENCE, Lunteren- The Netherlands, p. 23

116 KONDOROSI,E, CEBOLLA,A, FEHER,A, FOUCHER,F, GYORGYEY,J, KISS,E, OLAH,B, ROUDIER,F, TRINH,H, VINARDELL,J.M, DUDITS,D, HIRT,H, KONDOROSI,A. (1998) Control of Nod factor-induced cell cycle activation in Medicago roots. IN: IX. INTERNATIONAL CONGRESS ON PLANT TISSUE AND CELL CULTURE, Jerusalem, June 14-19, pp. 29

117 KOS,P.B, OBERSTRASS,J, RICHTER,A, LIKO,I, MOROUN,B, LUKACS,N. Analysis of binding sited of dsRNA-specific monoclonal antibodies. (1998) J. PEPTIDE SCI. 4 : 90

118 KOTA,Z, SZALONTAI,B, DROPPA,M, HORVATH,G, PALI,T. Fourier transform infrared and electron paramagnetic resonance spectroscopic studies of thylakoid membranes. (1998) JOURNAL OF MOLECULAR STRUCTURE 450 : 3

119 KOVACS,I, AYAYDIN,F, OBERSCHALL,A, IPACS,I, BOTTKA,S, PONGOR,S, DUDITS,D, CSORDAS TOTH,E. Immunolocalization of a novel annexin-like protein encoded by stress and abscisic acid responsive gene in alfalfa. (1998) THE PLANT J. 15 : 185-197

120 KOVACS,K.L, BAGYINKA,C, BODROSSY,L, FODOR,B, GYORFI,K, HANCZAR,T, OSZ,J, RAKHELY,G, TAKACS,M, TOTH,A, TUSZ,J. Recent Advances in Biohydrogen Research. Proceedings of Life Sciences Conference, Gozd Martuljek, Slovenia, 19-24 September 1998

121 KOVACS,K.L, BALAZS,E. A biotechnologia a kornyezetvedelem szolgalataban. "MAGYARORSZAG AZ EZREDFORDULON: LEHETOSEGEK AZ AGRARTERMELES KORNYEZETBARAT FEJLESZTESEBEN" (Kovacs, F., Kovacs, J. es Banczerowski, J. szerk.) ISBN 963 508 072 7, 9. fejezet, pp. 155-174 (1998) (in Hungarian)

122 KOVACS,K.L, RAKHELY,G, BRATU,H, TAKACS,M, POLLA,S, FODOR,B, GYORFI,K, TOTH,A, DAHL,C. Genes involved in hydrogen and sulfur metabolism in Chromatiaceae In: Proc. COST Workshop "Hydrogen Metabolism of Azotrophic and Anaerobic Bacteria" Umea, Sweden, p. 20, 1998

123 KOVACS,T, HARGITAI,A, KOVACS,K.L, MECS,I. pH dependent activation of the alternate transcriptional factor B in *Bacillus subtilis* (1998) FEMS MICROBIOL. LETT., 165 : 323-328

124 KRIEGER,A, RUTHERFORD,A.W, VASS,I, HIDEG,E. Relationship between activity D1 loss and Mn binding in photoinhibition of photosystem II (1998) BIOCHEMISTRY 37 : 16262-16269

125 KRIZBAI,I.A, DELI,M.A, PESTENACZ,A, SIKLOS,L, SZABO,A.C, ANDRAS,I, JOO,F. Expression of glutamate receptors on cultured cerebral endothelial cells. (1998) J. NEUROSCI. RES. 54 : 814819

126 LABUZ,D, TOTH,G, MACHELSKA,H, PRZEWLOCKA,B, BORSODI,A, PRZEWLOCKI,R. Antinociceptive effects of [illegible] derivatives of deltorphin I and deltorphin II in rat spinal cord: a search for selectivity of delta receptor subtypes. (1998) NEUROPEPTIDES 32 : 511-517

127 LACZKO,I, HOLLOSI,M, VASS,E, HEGEDUS,Z, MONOSTORI,E, TOTH,G.K. Conformational Effect of Phosphorylation on T Cell Receptor/CD3 Chain Sequences (1998) BIOCHEM. AND BIOPHYS. RES.COM. 242 : 474-479

128 LACZKO,I, HOLLOSI,M, VASS,E, TOTH,G.K. Liposome-induced conformational changes of an epitopic peptide and its palmitoylated derivative of influenza virus hemagglutinin. (1998) BIOCHEM BIOPHYS RES CO 249 : 213-217

129 LESHEM,Y.Y, KUIPER,P.J.C, ERDEI,L, LURIE,S, PERL-TREVES,R. Do Selye's mammalian "GAS concept and co-stress" response exist in plants?

[illegible] (1998) ANN. N.Y. ACAD. OF SCI. NEW YORK ACAD. SCI. [illegible]

[illegible] LIEBMANN K., [illegible] TSENG [illegible] DESHPANDE [illegible], ERDOS E.B., TIGYI G.: Identification of a lysophospholipid [illegible] (phospholipase [illegible]) [illegible] is present in commercial [illegible] preparations (1998) J. BIOL. CHEM. 273: 13461-13468

[illegible] LIEBMANN K., GUAN Z., TSENG [illegible], DESHPANDE [illegible], TIGYI G., WATSKY M.A.: Growth factor-like phospholipids generated after corneal injury (1998) AM. J. PHYSIOL. 274: C1065-1074

[illegible] LIVSHITS V.A., PÁLI T., MARSH D.: Relaxation time determinations by progressive saturation EPR: Effects of molecular motion and Zeeman modulation for spin labels (1998) JOURNAL OF MAGNETIC RESONANCE 133: 79-91

[illegible] LIVSHITS V.A., PÁLI T., MARSH D.: Spin relaxation measurements using first-harmonic out-of-phase absorption EPR signals (1998) J. OF MAGN. RESON. 134: [illegible]

[illegible] [illegible] VIGH L., [illegible] COSSINS A.R.: Catalytic hydrogenation of [illegible] membranes: effects on membrane fatty acid composition and physical properties (1998) BIOCHIM. BIOPHYS. ACTA 1368: [illegible]

[illegible] URBÁNYI ZS., KALABAY L., CSEH S., ZÁVODSZKY P., ARNAUD P., JAKAB L.: Isolation of human alpha2HS-glycoprotein synthesized by Sf9 cells (1998) ACTA MICROBIOL. IMMUNOL. HUNG. 45: 419-424

136 LOVAS S., PALYI I., VINCZE B., HORVATH J., KOVACS M., MEZO I., TOTH G., TEPLAN I., MURPHY R.F.: Direct anticancer activity of gonadotropin-releasing hormone-III (1998) J. PEPTIDE RES. 52: 384-389

[illegible] LUDMANN K., GERGELY C., DER A., VARO G.: Electric signals during the bacteriorhodopsin photocycle, determined over a wide pH range (1998) BIOPHYSICAL JOURNAL 75: 3120-3126

138 LUDMANN K., GERGELY C., VARO G.: Kinetic and thermodynamic study of the bacteriorhodopsin photocycle over a wide pH range (1998) BIOPHYSICAL JOURNAL 75: 3110-3119

139 LURIE S., FALLIK E., KLEIN J.D., KOZAR F., KOVACS K.: Postharvest heat treatment of apples to control San Jose scale (*Quadraspidiotus perniciosus* Comstock) and blue mold (*Penicillium expansum* Link) and maintain fruit firmness (1998) J. AMER. SOC. HORT. SCI. 123: 110-114

140 MAKI S., VONDERVISZT F., FURUKAWA Y., IMADA K., NAMBA K.: Plugging interactions of HAP2 pentamer into the distal end of flagellar filament revealed by electron microscopy (1998) J. MOL. BIOL. 277: 771-777

141 MARSH D., HORVÁTH L.I.: Structure, dynamics and composition of the lipid-protein interface. Perspectives from spin-labelling (1998) BIOCHIMICA ET BIOPHYSICA ACTA 1376: 267-296

142 MARSH D., PÁLI T., HORVÁTH L.I.: Chapter 2. Progressive saturation and saturation transfer EPR for measuring exchange processes and proximity relations in membranes. In: BIOLOGICAL MAGNETIC RESONANCE - SPIN LABELING: The next millenium (1998) (Berliner, L.J., ed.) Plenum Press, New York. pp. 23-82

143 MATE Z., SASS L., SZEKERES M., VASS I. AND NAGY F. (1998) UV-B induced differential transcription of psbA genes encoding the D1 protein of Photosystem II in the cyanobacterium *Synechocystis* 6803. IN:

PHOTOSYNTHESIS: MECHANISMS AND EFFECTS (Garab, G. ed.) Kluwer Academic Publishers, Amsterdam, pp. 2327-[illegible]

144 MATE,Z. SASS,L. SZEKERES,M. VASS,I. NAGY,F. : UV-B induced differential transcription of psbA genes encoding the D1 protein of photosystem II in the Cyanobacterium *Synechocystis* 6803. (1998) J. BIOL. CHEM. 273 : 17439-17444

145 MATHE,E. BOROS,I. JOSVAY,K. LI,K. PURO,J. KAUFMAN,T.C. SZABAD,J. : The Tomaj mutant alleles of alpha Tubulin67C reveal a requirement for the encoded maternal specific tubulin isoform in the sperm aster, the cleavage spindle apparatus and neurogenesis during embryonic development in Drosophila (1998) J. CELL SCI. 111 : 887-896

146 MATHUR, J. AND KONCZ, CS. Establishment and maintenance of cell suspension cultures of *Arabidopsis thaliana*. (1998) IN : *ARABIDOPSIS PROTOCOLS* , MARTINEZ-ZAPATER J. M. AND SALINAS, J. EDS., HUMANA PRESS, pp. 27-30

147 MATHUR, J. AND KONCZ, CS. Protoplast isolation and culture in *Arabidopsis*. (1998) IN : *ARABIDOPSIS PROTOCOLS* , MARTINEZ-ZAPATER J. M. AND SALINAS, J. EDS., HUMANA PRESS pp. 35-42

148 MATHUR, J. AND KONCZ, CS. Callus culture and regeneration in *Arabidopsis thaliana*. (1998) IN : *ARABIDOPSIS PROTOCOLS* , MARTINEZ-ZAPATER J. M. AND SALINAS, J. EDS., HUMANA PRESS pp. 31-34

149 MATHUR, J. AND KONCZ, CS. Direct DNA transformation of protoplasts in *Arabidopsis*. (1998) IN : *ARABIDOPSIS PROTOCOLS* , MARTINEZ-ZAPATER J. M. AND SALINAS, J. EDS., HUMANA PRESS pp. 267-276

150 MATHUR,J. MOLNAR,G. FUJIOKA,S. TAKATSUTO,S. SAKURAI,A. YOKOTA,T. ADAM,G. VOIGT,B. NAGY,F. MAAS,C. SCHELL,J. KONCZ,C. SZEKERES,M. : Transcription of the *Arabidopsis CPD* gene, encoding a steroidogenic cytochrome P450, is negatively controlled by brassinosteroids. (1998) PLANT J. 14 : 593-602

151 MATHUR,J. SZABADOS,L., SCHAEFER,S. GRUNENBERG,B. LOSSOW,A. JONAS-STRAUBE,E. SCHELL,J. KONCZ,C. KONCZ-KALMAN,Z. : Gene identification with sequenced T-DNA tags generated by transformation of *Arabidopsis* cell suspension. (1998) PLANT J. 13 : 707-716

152 MEZO, I., VINCZE, B., PATO, J., TOTH, G., LOVAS, S., VADASZ, ZS., TEPLAN, I., PALYI, I., TURI, G., KALNAY, A., GULYAS, J.C., MAK, M., MURPHY, R.F. (1998) Studies with conjugates of GnRH analogues having direct antitumor activity. In: PEPTIDES 1996 (Eds.: Robert Ramage and Roger Epton) The European Peptide Society & The Royal Society of Chemistry 647-648

153 MIHAILESCU,D. HORVATH,L.I. : Molecular dynamics of lipid association at the hydrophobic interface of gramicidin S. (1998) EUROPEAN BIOPHYSICS JOURNAL 28 : [illegible]

154 MIHALY,J. HOGGA,I. BARGES,S. GALLONI,M. MISHRA,R.K. HAGSTROM,K. MULLER,M. SCHEDL,P. SIPOS,L. GAUSZ,J. GYURKOVICS,H. KARCH,F. : Chromatin domain boundaries in the Bithorax complex. (1998) CELL MOL. LIFE SCI. 54 : 60-70

155 MONOSTORI,E. : Phosphorylated ITAM sequences of the -chain induce tyrosine phosphorylation of cellular proteins independently from p56lck. 11TH SYMPOSIUM ON SIGNALS AND SIGNAL PROCESSING IN THE IMMUNE SYSTEM. 13-17 September, 1998, Balatonoszod

356 MONOSTORI,E. Specific points in analysis of the effect of phosphatidylcholine, a major component of the LDL complex for the immune cells. Scientific Meeting on the Natural Sciences Award of TEVA-Biogal, July 1 1998, Budapest

357 MUNOZ,J.A, CORONADO,C, PEREZ-HORMAECHE,J, KONDOROSI,A, RATET,P. Palomar MsPG3, a Medicago sativa polygalacturonase gene expressed during the alfalfa-Rhizobium meliloti interaction (1998) PROC. NATL. ACAD. SCI. U.S. 95: 9687-9692

358 MUNTEANU,M.G, VLAHOVICEK,K, PARTHASARATHY,S, SIMON,I, PONGOR,S. Rod models of DNA: Sequence-dependent anisotropic elastic modelling of local phenomena (1998) TRENDS BIOCHEM.SCI. 23: 341-347

359 MURATA, N, GOMBOS, Z, KANERVO, E, SIPPOLA, K, ARO, E-M. The photoinhibition of the photosystem II complex is regulated by unsaturation of fatty acids in membrane lipids (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS. Ed. GARAB,G. KLUWER ACADEMIC PUBL., DORDRECHT pp 1777-1782

360 NAGY,A, MOENS,C, IVANYI,E, PAWLING,J, GERTSENSTEIN,M, HADJANTONAKIS,A.K, PIRITY,M, ROSSANT,J. Multipurpose Gene Alterations from a single Targeting Vector: Dissecting the Role of N-myc in Development (1998) CURRENT BIOLOGY 8: 661-664

361 NAGY,L, YAMAGUCHI,T, NOMURA,M, PALI,T, OHTAKI,H. The structure of d-ribose and d-glucosamine complexes of copper (II) - electronic, EPR and EXAFS spectral studies (1998) ACH-MODELS IN CHEMISTRY 135: 129-145

362 NAQVI,K.R, JAVORFI,T, MELO,T.B, GARAB,G. More on the catalysis of internal conversion in chlorophyll a by an adjacent carotenoid in light-harvesting complex (Chl a/b LHC II) of higher plants: time-resolved triplet-minus-singlet spectra of detergent perturbed trimers (1998) SPECTROCHIMICA ACTA PART A 54: [illegible]

363 NEMETH,K, SALCHERT,K, PUTNOKY,P, BHALERAO,R, KONCZ-KALMAN,Z, STANKOVIC-STANGELAND,B, BAKO,L, MATHUR,J, OKRESZ,L, STABEL,S, GEIGENBERGER,P, STITT,M, REDEI,P.G, SCHELL,J, KONCZ,C. Pleiotropic control of glucose and hormone responses by PRL1, a nuclear WD protein, in *Arabidopsis* (1998) GENES AND DEVELOPMENT 12: 3059-3073

364 NEMETH,L, DELI,M.A, FALUS,A, SZABO,C.A, ABRAHAM,C.S. Cerebral ischemia reperfusion induced vasogenic brain edema formation in rats: effect of an intracellular histamin receptor antagonist (1998) EUR. J. PED. SURG. 8: 216219

365 OKRESZ,L, MATHE,C, HORVATH,E, SCHELL,J, KONCZ,C, SZABADOS,L. T-DNA trapping of a cryptic promoter identifies an ortholog of highly conserved SNZ growth arrest response genes in *Arabidopsis* (1998) PLANT SCIENCE 138: 217-228

366 ORMOS,P, SZARAZ,S, CUPANE,A, NIENHAUS,G.U. Structural factors controlling ligand binding to myoglobin: A kinetic hole-burning study (1998) PROC. NATL. ACAD. SCI. USA 95: 6762-6767

367 PATARICZA,J, PENKE,B, BALOGH,G, PAPP,J.G. Polarographic detection of nitric oxide released from cardiovascular compounds in aqueous solutions (1998) J. PHARMACOL. TOXICOL. METHODS 39: 91-95

168 PERELI,K. BIHARI,Z. KESERU,P. POLYAK,B. BODROSSY,L. RAKHELY,G. KOVACS,K.L. Kornyezetszennyezo veszelyes hulladekok biologiai lebontasa (1998) BIOKEMIA 22 : 61-65

169 PERNA,N.T. MAYHEW,G.F. POSFAI,G. ELLIOTT,S. DONNENBERG,M.S. KAPER,J.B. BLATTNER,F.R. Molecular evolution of a pathogenicity island from enterohemorrhagic Escherichia coli O157:H7 (1998) INFECT. IMMUN. 66 : 3810-3817

170 PETER,A. TOROK,G. ARMSTRONG,D.W. TOTH,G. TOURWE,D. Effect of temperature on retention of enantiomers of beta-metyl amino acids on a tiecoplanin chiral stationary phase (1998) J. CHROMATOGRAPHY A 826 : 177-190

171 PETER,A. TOROK,G. TOTH,G. VAN DEN NEST,W. LAUS,G. TOURWE,D. ARMSTRONG,P.W. Enantiomeric separation of unusual secondary aromatic amino acids (1998) CHROMATOGRAPHIA 48 : 53-58

172 PETER,A. TOROK,G. TOTH,G. VAN DEN NEST,W. LAUS,G. TOURWE,D. Chromatographic methods for monitoring of optical isomers of unnatural aromatic amino acids (1998) J. CHROMATOGRAPHY A 719 : 165-176

173 PFEIFFER,I. GYANTAR,M. KUCSERA,J. PARDUCZ,A. Isolation of dsRNA-associated VLPs from the strain Cryptococcus hungaricus CBS 6569 (1998) FEMS MICROBIOLOGY LETTERS. 162 : 151-154

174 PINTER,M. JEKELY,G. SZEPESI,R.J. FARKAS,A. THEOPOLD,U. MEYER,H.E. LINDHOLM,D. NASSEL,D.R. HULTMARK,D. FRIEDRICH,P. TER94, a Drosophila homolog of the membrane fusion protein CDC48/p97, is accumulated in nonproliferating cells: in the reproductive organs and in the brain of the imago (1998) INSECT BIOCHEM.MOL. BIOL. 28 : 91-98

175 POLGAR,L. FELFOLDI,F. Oligopeptidase B: Cloning and probing stability under nonequilibrium conditions (1998) PROTEINS 30 : 424-434

176 PUTNOKY,P. KERESZT,A. NAKAMURA,T. ENDRE,G. GROSSKOPF,E. KISS,P. KONDOROSI,A. The *pha* gene cluster of *Rhizobium meliloti* involved in pH adaptation and symbiosis encodes a novel type of K+ efflux system (1998) MOLECULAR BIOLOGY 28 : 1091-1101

177 RAKHELY,G. COLBEAU,A. GARIN,J. VIGNAIS,P.M. KOVACS,K.L. Unusual gene organization of HydSL, the stable [NiFe] hydrogenase in the photosynthetic bacterium *Thiocapsa roseopersicina* (1998) J. BACTERIOL. 180 : 1460-1465

178 RAKOSY-TICAN,L. MENCZEL,L. Plant regeneration from cell suspension-derived protoplasts of Nicotiana africana (1998) PLANT CELL TISSUE ORGAN CULTURE 54 : 93-95

179 RASKO,I. Molecular genetic clues in the complex Alzheimer's puzzle (1998) CLIN. NEUROSCI. Suppl. 51 : 42

180 RIQUELME, A., VASS, I., BERTI, M AND PINTO, M. (1998) "Ultraviolet-B radiation induced resistance to the photoinhibition at bean (*Phaseolus vulgaris* L.) plants grown under nitrogen deficiency" IN : PHOTOSYNTHESIS MECHANISMS AND EFFECTS (Garab, G. ed.), Kluwer Academic Publishers, Amsterdam, pp. 2385-2388

181 RORTH,P. SZABO,K. BAILEY,A. LAVERTY,T. REHM,J. RUBIN,G.M. WEIGMANN,K. MILAN,M. BENES,V. ANSORGE,W. COHEN,S.M. Systematic gain-of-function genetics in *Drosophila* (1998) DEVELOPMENT 125 : 1049-57

182 ROTTMANN,M., FABIAN,G., SPICHER,K., OFFERMANNS,S., SZUCS,M.: Receptor-mediated activation of G proteins by kappa opioid agonists in frog (Rana esculenta) brain membranes. (1998) BRAIN RES. BULLETIN 45: 467-474

183 SALCHERT,K., BHALERAO,R., KONCZ-KALMAN,Z., KONCZ,C.: Control of cell elongation and stress responses by steroid hormones and carbon catabolite repression in plants. (1998) PHIL. TRANS. R. SOC. LOND. B 353: 1517-1520

184 SAR,P.C., HIDEG,E., VASS,I., HIDEG,K.: Synthesis of aryl-N-adamant-1-yl nitrones and using them for spin trapping of hydroxyl radicals. (1998) BIOORGANIC & MEDICINAL CHEMISTRY LETTERS 8: 379-382

185 SASS, L. AND VASS, I. (1998) 'Characterisation of UV-B tolerance in lichens by photosystem II electron transport measurements'. IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS (Garab, G. ed.) Kluwer Academic Publishers, Amsterdam, pp. 2381-2384

186 SCHULTZE,M., KONDOROSI,A.: Regulation of symbiotic root nodule development. (1998) ANNU. REV. GENET 32: 33-57

187 SCHULTZE,M., STAEHELIN,C., BRUNNER,F., GENETET,I., LEGRAND,M., FRITIG,B., KONDOROSI,E., KONDOROSI,A.: Plant chitinase/lysozyme isoforms show distinct substrate specificity and cleavage site preference towards lipochitooligosaccharide Nod signals. (1998) PLANT J 16: 571-580

188 SEKERKOVA,G., KATAROVA,Z., SZABO,G.: Using GADlacZ transgenic mice as a marker system for homotopic transplantation. (1998) BRAIN RES. BRAIN RES. PROTOCOLS 3: 107-118

189 SIKLOS,L., ENGELHARDT,J.I., ALEXIANU,M.E., GURNEY,M.E., SIDDIQUE,T., APPEL,S.H.: Characteristic patterns of intracellular calcium develop in motoneurons exhibiting different progression of degeneration in SOD-1 mutant mice. (1998) J. NEUROPATH. EXP. NEUROLOGY, 57: 571-587

190 SIMIDJIEV, I., STOYLOVA, S., HOLZENBURG, A., AMENITSCH, H., LAGGNER, P., JAVORFI, T., MUSTARDY, L., GARAB, GY.: Recognition of membranes using non-bilayer forming lipids and plant LHC II (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS, Ed. GARAB,G., KLUWER ACADEMIC PUBL., DORDRECHT pp 1799-1802

191 SIMIDJIEV,I., BARZDA,V., MUSTARDY,L., GARAB,G.: Role of thylakoid lipids in the structural flexibility of lamellar aggregates of the isolated light-harvesting chlorophyll a/b complexes of Photosystem II (1998) BIOCHEMISTRY 37: 4169-4173

192 SIPOS,L., MIHALY,J., KARCH,F., SCHEDL,P., GAUSZ,J., GYURKOVICS,H.: Transvection in the Drosophila *Abd-B* domain: Extensive upstream sequences are involved in anchoring distant cis-regulatory regions to the promoter. (1998) GENETICS 149: 1031-1050

193 SPAINK H. P., KONDOROSI A., HOOYKAAS P. J. J.: The Rhizobiaceae. Kluwer Academic Publishers, Dordrecht, 566 pages, 1998

194 SPETEA,M., MONORY,K., TOMBOLY,C., TOTH,G., TZAVARA,E., BENYHE,S., HANOUNE,J., BORSODI,A.: *In vitro* binding and signaling profile of the novel mu opioid receptor agonist endomorphin 2 in rat brain membranes. (1998) BIOCHEM. BIOPHYS. RES. COMM. 250: 720-725

195 SPETEA,M., NEVIN,S.T., HOSZTAFI,S., RONAI,A.Z., TOTH,G., BORSODI,A.: Affinity profiles of novel receptor selective benzofurane derivatives of non-peptide opioids. (1998) NEUROCHEM. RES. 23: 1211-1216

196 SPETEA,M., OTVOS,F., TOTH,G., NGUYEN,T.M.-D., SCHILLER,P.W., VOGEL,Z., BORSODI,A.: Interaction of agonist peptide [^{3}H]Tyr-D-Ala-Phe-Phe-NH_2 with opioid receptor in rat brain and CHO-K1 cell line. (1998) PEPTIDES 19: 1091-1098

197 STACHEL,M., CSANADI,G., VOLLMANN,J., LELLEY,T.: Genetic diversity in pumpkins (*Cucurbita pepo* L.) as revealed by inbred lines using RAPD markers. (1998) CUCURBIT GENETICS COOPERATIVE REPORT 21: 48-50

198 STOVEN, S., ANDO,I., KADALAYIL, L., ENGSTROM, Y., HULTMARK, D. (1998) Hunting for the Relish protein. In: 39th Annual Drosophila Research Conference. "Cell Biology" section. Washington DC

199 SZABO,G., DALLMANN,G., MULLER,G., PATTHY,L., SOLLER,M., VARGA,L.: A deletion in the myostatin gene causes the compact (Cmpt) hypermuscular mutation in mice. (1998) MAMM GENOME 9: 671-672

200 SZABO,K., WELKER,E., BAKOS,E., MULLER,M., RONINSON,I., VARADI,A., SARKADI,B.: Drug-stimulated nucleotide trapping in the human multidrug transporter MDR1. Cooperation of the nucleotide binding domains. (1998) J BIOL CHEM 273: 10132-10138

201 SZAKONYI,G., DUX,L., HORVATH,L.I.: Boundary, standby and fluid lipids at the hydrophobic interface of Ca-ATPase in sarcoplasmic reticulum. (1998) JOURNAL OF MOLECULAR STRUCTURE 450: 2

202 SZEKERES,M., KONCZ,C.: Biochemical and genetic analysis of brassinosteroid metabolism and function in *Arabidopsis*. (1998) PLANT PHYS BIOCHEM 36: 145-155

203 SZILAGYI,A., FORGACS,E., CSERHATI,T.: Separation of nonionic surfactant according to the length of the ethylene oxide chain on alumina layers. (1998) TOXICOL ENVIRON CHEM 65: 95-102

204 SZILAGYI,A.N., VAS,M.: Anion activation of 3-phosphoglycerate kinase requires domain closure. (1998) BIOCHEMISTRY 37: 8551-8563

205 SZILAGYI,A.N., VAS,M.: Sequential domain refolding of pig muscle 3-phosphoglycerate kinase: Kinetic analysis of reactivation. (1998) FOLDING AND DESIGN 3: 565-575

206 SZUTS,V., MOLLERS,U., BITTNER,K., SCHURMANN,G., MURATOGLU,S., DEAK,F., KISS,I., BRUCKNER,P.: Terminal differentiation of chondrocytes is arrested at distinct stages identified by their expression repertoire of marker genes. (1998) MATRIX BIOLOGY 17: 435-448

207 TAKACS,M., RAKHELY,G., KOVACS,K.L.: Elet a kuktában: különc mikroorganizmusok. (1998) ELET ES TUDOMANY 53: 79-81 (in Hungarian)

208 TANEVA, S.G., SIMIDJIEV, I., GARAB, GY., MUGA, A.: Termal stability and conformational properties of smaller macroaggregates of LHC II. (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS, Ed. GARAB,G., KLUWER ACADEMIC PUBL., DORDRECHT pp 325-328

209 TANG,Y., TIE,F., BOROS,I., HARROD,R., GLOVER,M., GIAM,C.-Z.: An extended alpha-helix and specific amino acid residues opposite the DNA-binding surface of the cAMP response element binding protein basic domain are important for human T cell lymphotropic retrovirus type I tax binding. (1998) J. BIOL. CHEM. 273: 27339-27346

210 TELENIUS,H., KERESO,J., CSONKA,E., PRAZNOVSZKY,T., MAXWELL,A., DE JONG,G., PEREZ,C.F., DRAYER,J.I., HADLACZKY,G. (1998) Stable transfer across mammalian species of a functional satellite DNA-based (SATAC™) artificial chromosome. In: 1st Annual Meeting of the American Society of Gene Therapy, Seattle, WA May 28-31

[illegible] TELEKI [illegible], TOTH [illegible], [illegible], KERESZ [illegible], [illegible] BRAZNOVSZKY [illegible], DE BOSCO [illegible], PEREZ [illegible] [illegible] (1998) Development of [illegible] [illegible] Annual Meeting of the American Society of Gene Therapy, Seattle, WA May28-31

[illegible] TIGYI G., FISCHER D.J., LILIOM K., GOTZ Z., VIRAG T., SUN G., MILLER D.D., MURAKAMI-MUROFUSHI K., KOBAYASHI S., ERIKSON J.R. Determinants of receptor subtype specificity in the LPA-like lipid mediator family (1998) IN: EICOSANOIDS AND OTHER BIOACTIVE LIPIDS IN CANCER, INFLAMMATION AND RADIATION INJURY 4 Honn K.V. (ed) New York: Plenum Press pp 245-252

[illegible] TIGYI G., LILIOM K., FISCHER D.J., GUO Z. Phospholipid growth factors: identification and mechanism of action (1998) IN: CRC HANDBOOK OF LIPID SECOND MESSENGERS Laychock S.G. (ed) Boca Raton: CRC Press pp 51-81

214 TOKAJI Z. [illegible] for the [illegible] of the [illegible] of [illegible] membranes (1998) FEBS LETTERS 42[illegible] [illegible]

215 TOMANCAK P., GUICHET A., ZAVORSZKY P., EPHRUSSI A. Oocyte polarity depends on regulation of gurken by Vasa (1998) DEVELOPMENT 125 1723-1732

216 TOMPA P., FRIEDRICH P. Prion proteins as memory molecules: An hypothesis (1998) NEUROSCIENCE 86 1037-1043

217 TOMPA P., FRIEDRICH P. Synaptic metaplasticity and the local charge effect in postsynaptic densities (1998) TRENDS NEUROSCI 21 97-102

218 TORDAI A., ANDRIKOVICS H., [illegible], KLEIN I., PENZES M., SARKADI B., VARADI A. High frequency of the haemochromatosis C282Y mutation in Hungary can argue against the Celtic origin of the mutation (1998) J MED GENET 35 878-879

219 TOTH G., PETER A., DARULA ZS., BORSODI A., TOURWE D. (1998) Conformationally constrained hydrophobic deltorphin analogs with 2-aminotetralin-2-carboxylic acid. In: PEPTIDES 1996 (Eds: Robert Ramage and Roger Epton) The European Peptide Society & The Royal Society of Chemistry 833-834

220 TOURWE D., IVERBEKE K., KAZMIERSKI W., TOTH G. Cyclic aromatic amino acids with constrained χ1 and χ2 dihedral angles (1998) METHODS IN MOL. BIOL. 73 321-338

221 TOURWE D., MANNEKENS E., DIEM T.N.T., VERHEYDEN P., JASPERS H., TOTH G., PETER A., KERTESZ I., TOROK G., CHUNG N.N., SCHILLER P.W. Side chain methyl substitution in the delta opioid receptor antagonist TIPP has an important effect on the activity profile (1998) J MED CHEM 41 5167-5176

222 TRINH T.H., RATET P., KONDOROSI E., DURAND P., KAMATE K., BAUER P., KONDOROSI A. Rapid and efficient transformation of diploid Medicago truncatula and Medicago sativa ssp. falcata germ lines improved in somatic embryogenesis (1998) PLANT CELL REP 17 345-355

223 TRYOEN-TOTH P., GAVERIAUX-RUFF C., MADERSPACH K., LABOURDETTE G. Regulation of kappa-opioid receptor mRNA level by cyclic AMP and growth factors in cultured rat glial cells (1998) MOL BRAIN RES 55 141-150

224 TURCK,F., KOZMA,S.C., THOMAS,G., NAGY,F.: A heat-sensitive *Arabidopsis thaliana* kinase substitutes for human p70s6k function in vivo (1998) MOLECULAR AND CELLULAR BIOLOGY 18 : 2038-2044

225 TURCSANYI,E., BARNES,J.D.: The role of apoplastic ascorbate in ozone detoxification of broad bean (1998) 5th CAPER Meeting, Cranfield UNIVERSITY Silsoe, Bedf&IACR Rothamsted, England

226 TURCSANYI,E., DARKO,E., BORBELY,G., LEHOCZKI,E.: The activity of oxyradical-detoxifying enzymes is not correlated with paraquat resistance in Conyza canadensis (L.) Cronq. (1998) PESTICIDE BIOCHEMSITRY AND PHYSIOL. 60 : 1-11

227 TURCSANYI,E., PLOCHL,M., BARNES,J.D.: Exploring the role of extracellular ascorbate in mediating ozone tolerance (1998) XIth International Congress on Photosynthesis 1998, augusztus 17-22 Budapest, Magyarország

228 TUSNADY,G.E., SIMON,I.: Principles governing amino acid composition of integral membrane proteins: application to topology prediction (1998) J.MOL. BIOL. 283 : 489-506

229 TUSNADY,G.E., VARADI,A.: Short MRP may not be short (1998) BIOCHEM. BIOPHYS.RES.CO. 247 : 465-468

230 UMEDA,M., BHALERAO,R.P., SCHELL,J., UCHIMIYA,H., KONCZ,C.: A distinct cyclin-dependent kinase-activating kinase of *Arabidopsis thaliana* (1998) PROC. NATL. ACAD. SCI. USA 95 : 5021-5026

231 VARADI,A., TUSNADY,G.E., BAKOS,E., SARKADI,B.: Membrane topology of the human multidrug resistance-associated protein (MRP) and its homologs (1998) CYTOTECHNOLOGY 27 : 71-78

232 VARANI,K., CALO,G., RIZZI,A., MERIGHI,S., TOTH,G., GUERRINI,R., SALVADORI,S., BOREA,P.A., REGOLI,D.: Nociceptin receptor binding in mouse forebrain membranes: thermodynamic characteristics and structure activity relationships (1998) BR. J. PHARMACOL. 125 : 1485-1490

233 VARKONYI, ZS., ZSIROS, O., FARKAS, T., GARAB, GY., UGHY, B., SZEGLETES, ZS., GOMBOS, Z.: Adaptation mechanism of the photosynthetic apparatus of *Cylindrospermopsis raciborskii* ACT 9502 to different environmental effects (1998) IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS, Ed. GARAB,G., KLUWER ACADEMIC PUBL., DORDRECHT pp 1819-1822

234 VASS, I., MATE, Z., SASS, L., VICZIAN, A., NAGY, F., KIRILOVSKY, D. AND ETIENNE, A-L. (1998). UV-B induced damage of Photosystem II and its repair via *de novo* synthesis of the D1 and D2 reaction center subunits. IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS. (Garab, G. ed.), Kluwer Academic Publishers, Amsterdam, 2109-2114

235 VELICEASA,D., TAUSCHER,G., KOS,P.B., LIKO,I., URAY,K., SURANYI,G., HUDECZ,F., LUKACS,N.: Epitope mapping of barley mild mosaic virus coat protein using multipin peptide synthesis method (1998) J. PEPTIDE SCI. 4 : 82

236 VENETIANER PAL: A DNS szep uj vilaga. Kulturtrade Kiado, Bp., 1998

237 VENETIANER PAL: DNS (szocikk) Magyar Nagylexikon. VI. Csen-Ec. Magyar Nagylexikon Kiado, Bp. 1998., pp. 673-676

238 VENETIANER PAL: Jovonk es a mikrobiologia. Ezredfordulo. 1998/4 pp 30-33

239 VENETIANER, A., SZATHMARI, M., PIRITY, M., HEVER-SZABO, A. AND DIACONU, C. (1998) The effect of hyperthermic treatment on drug

sensitivity of hepatoma cells. Mol. Chaperones and The Heat Shock Response (1998) [illegible] 355-366

240 VERTESSY,B.G., HARMAT,V., BOCSKEI,Z., NARAY-SZABO,G., OROSZ,F., OVADI,J.: Simultaneous binding of drugs with different chemical structures to Ca2+-calmodulin: crystallographic and spectroscopic studies. (1998) BIOCHEMISTRY 37: 15300-15310.

241 VERTESSY,B.G., LARSSON,G., PERSSON,T., BERGMAN,ANNA-CARIN, PERSSON,R., NYMAN,P.O.: The complete triphosphate moiety of non-hydrolyzable substrate analogues is required for a conformational shift of the flexible C-terminus in E.coli dUTP pyrophosphatase. (1998) FEBS LETT. 421: 83-88.

242 VICZIAN, A., MATE, Z., SASS, L., NAGY, F. AND VASS, I. (1998) UV-B induced differential transcription of *psbD* genes encoding the D2 protein of Photosystem II in the cyanobacterium *Synechocystis* 6803. IN: PHOTOSYNTHESIS: MECHANISMS AND EFFECTS. (Garab G. ed.) Kluwer Academic Publishers, Amsterdam, pp. 2341-2344

243 VIGH,L., MARESCA,B., HARWOOD,J.L.: Does the membrane's physical state control the expression of heat shock and other genes? (1998) TRENDS IN BIOCHEM. SCI. 23: 369-374.

244 VILMOS,P., KURUCZ,E.: Insect immunity: evolutionary roots of the mammalian innate immune system. (1998) IMMUNOLOGY LETTERS 62: 59-66.

245 VISSI,E., CSORDAS TOTH,E., KOVACS,I., MAGYAR,Z., HORVATH,V.G., BAGOSSI,P., GERGELY,P., DUDITS,D., DOMBRADI,V.: Protein phosphatase 1 catalytic subunit isoforms from alfalfa: biochemical characterization and cDNA cloning. (1998) ARCH. BIOCHEM. BIOPHYS. 360: 206-214.

246 VONDERVISZT,F., IMADA,K., FURUKAWA,Y., UEDAIRA,H., TANIGUCHI,H., NAMBA,K.: Mechanism of self-association and filament capping by flagellar HAP2. (1998) J. MOL. BIOL. 284: 1399-1416.

247 YAMASHITA,I., HASEGAWA,K., SUZUKI,H., VONDERVISZT,F., MIMORI-KIYOSUE,Y., NAMBA,K.: Structure and switching of bacterial flagellar filaments studied by X-ray fiber diffraction. (1998) NATURE STRUCT. BIOLOGY 5: 125-132.

248 YOON,Y.G., POSFAI,G., SZYBALSKI,W., KIM,S.C.: Cre/loxP-mediated in vivo excision of large segments from yeast genome and their amplification based on the 2mum plasmid-derived system. (1998) GENE 223: 67-76.

249 ZAVODSZKY,P., KARDOS,J., SVINGOR,A., PETSKO,G.A.: Adjustment of conformational flexibility is a key event in the thermal adaptation of proteins. (1998) PROC. NATL. ACAD. SCI. USA 95: 7406-7411.

250 ZSIROS,O., VARKONYI,Z., MUSTARDY,L., [illegible],B., GOMBOS,Z.: Light is necessary in the acclimation process of photosynthetic organisms to low-temperature stress. (1998) IN: ADVANCES IN PLANT LIPID RESEARCH (EDS: SANCHEZ, J., CERDA-OLMEDO, E., MARTINEZ-FORCE, E.) UNIVERSIDAD DE SEVILLA, SPAIN pp. 122-124

251 ZSOLDOS,F., VASHEGYI,A., BONA,L., PECSVARADI,A., SZEGLETES,Z.: Aluminium- es nitritstressz hatasa [illegible] buza es durum buza csiranovenykori novekedesere es kaliumtranszportjara. (1998) NOVENYTERMELES Tom. 47 No. 5.

252 ZSURKA,G., KALMAN,J., JUHASZ,A., CSASZAR,A., RASKO,I., JANKA,Z., VENETIANER,P.: No mitochondrial haplotype was found to increase risk for Alzheimer's disease. (1998) BIOL. PSYCHIATRY 44: 371-373.

ZUANAZZI J.A.S., CLERGEOT P.H., QUIRION J.C., HUSSON H.-P., KONDOROSI A., RATET P. : Production of Sinorhizobium meliloti nod gene activator and repressor flavonoids from Medicago sativa roots. (1998) MOL PLANT MICROBE INTERACT 11 : 784-794

GANOT P, JADY BE, BORTOLIN M-L, DARZACQ X and KISS T : Nucleolar Factors Direct the 2'-O-Ribose Methylation and Pseudouridylation of U6 Spliceosomal RNA (1999) Mol. Cell. Biol., 19(10): p. 6906-6917

NARAYANAN A, LUKOWIAK A, JADY BE, DRAGON F, KISS T, TERNS RM and TERNS MP : Nucleolar localization signals of Box H/ACA small nucleolar RNAs. (1999) EMBO J. 18(18):5120-5130

BORTOLIN M-L, GANOT P, KISS, T. : Elements essential for accumulation and function of small nucleolar RNAs directing site-specific pseudouridylation of ribosomal RNAs. (1999) EMBO J 18(2): 457-69

KISS-LASZLO Z, HENRY Y, KISS T. : Sequence and structural elements of methylation guide snoRNAs essential for site-specific ribose methylation of pre-rRNA. (1998) EMBO J 17(3):797-807

ACTIVE PROMOTION OF CONTACT

Planned international conferences, symposia, seminars and other similar fora for exchange of information

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SBC 2000
Symposium on Biological
Chirality 2000

Symposium on
Biological Chirality

August 27-31, 2000

Szeged, Hungary

General Information

The first interdisciplinary Symposium on Biological Homochiralitywas held in Serramazzoni (Modena) Italy between September 6&shy;12, 1998 Representatives of the participating countries decided to continue organizingsymposia under the title Biological Chirality in every second year Thedesign and synthesis of enantiomeric drugs, cosmetics, biomaterials, additivesetc and their application in medicine, technology and everyday life isa key issue at the turn of the century Under the new title of the symposiumwe plan to cover all main topics related to biological chirality from evolutionaryorigin of asymmetry on Earth to chiral catalyst, auxiliaries supportingchiral syntheses of enantiomeric products and chiral separations The uniquefeature of the symposium is its interdisciplinary nature our main goalis to bring together scientists of all disciplines related to chirality The venue of the Symposium will be the Biological Research Center in Szeged.Hungary

The symposium will be organized by the Chiroptical Spectroscopic Laboratoryof the Department of Organic Chemistry, Eotvos LorandUniversity, Budapest in collaboration with the Biological Research Centerin Szeged, Hungary

Following the opening honorary lecture by Prof. K. Nakanishi on Sundayevening, the program of the next four days will include 20-minute plenarylectures given by outstanding scientists from all over the world, two postersessions and round-table discussions

The timing and place of the Symposium are of particular significance Theyear 2000 is the 1000th anniversary of the foundation of the Hungariankingdom Our Symposium will be part of a special celebration involvinga series of scientific and cultural events which will be held in Hungaryduring the year 2000.

Main Topics

- Chirality in nature, science and arts
- Homochirality on Earth and in the Universe
- The right&shy;left classification problem
- Theory of biological homochirality
- Palaeochirality
- Chiral recognition in biology
- Amino acid racemization. D-amino acids in nature
- Chirality of natural substances
- Asymmetric catalysis
- Asymmetric autocatalysis and amplification of enantiomericexcess
- Enantioselective syntheses: new routes
- Chromatographic separation of enantiomers
- Electrophoretic separation of enantiomers
- Organic syntheses in biomimetic medium
- Enantiomeric versus racemic drugs
- Enantiomeric biomaterials

Scientific Program Committee

Miklos Hollósi (Chairman, Hungary)
Georg Frater (Switzerland)
Lajos Keszthelyi (Hungary)

Paul G. Mezey (Canada)
Gyula Palyi (Italy)
Julius Rebek (USA)
Vitomir Sunjic (Croatia)
Shigeru Terabe (Japan)

Organizing Committee

Miklos Hollosi, (Chairman, Hungary)
Gábor Dibó, (Secretary, Hungary)
Ilona Laczko (Hungary)
Zsuzsa Majer (Hungary)
Bela Noszal (Hungary)
Claudio Zucchi (Italy)
Elemer Vass (Hungary)

Registration

Reduced registration fee (before April 30, 2000)

Regular US$ 250.00
Student US$ 150.00
Accompanying person US$ 100.00

Full registration fee (after April 30, 2000)

Regular US$ 300.00
Student US$ 200.00
Accompanying person US$ 150.00

Deadlines

Submission of
Oral presentation May 15, 2000
Poster abstract June 15, 2000

Conference Secretariat

SBC 2000 Conference Office
c/o **Prof. Miklós Hollósi,** Chairman
Department of Chemistry
Eotvos University
P.O. Box 32
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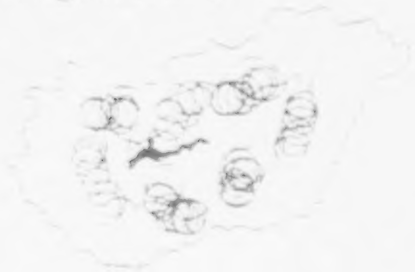
9th INTERNATIONAL CONFERENCE ON RETINAL PROTEINS

September 14-19, 2000
Szeged, Hungary



Announcement

It is a great pleasure to invite you to the 9th International Conference on Retinal Proteins. This biennial conference provides the opportunity to exchange ideas on all aspects of retinal proteins and builds new scientific relations and collaborations.

General Information

The Conference will be organized in the Biological Research Centre of the Hungarian Academy of Sciences in Szeged, Hungary. The official language of the meeting will be English. In addition to the scientific programs, the participants will have the opportunity to discover the beautiful eclectic town of Szeged located on the banks of the Tisza River and to visit the nearby Hungarian National Memorial Park at Opusztaszer.

Scientific Program

The program will consist of invited lectures, round table discussions and poster sessions on the following topics:

- Structure
- Photoreactions
- Energy conversion
- Signal transduction
- Mutants
- Divergence
- Cells and tissues
- Applications

Important Dates and Deadlines

Registration: February 15, 2000
Second circular: April 1, 2000
Final registration and Abstract: July 1, 2000
The Conference: September 14-19, 2000

[illegible]

Hungary

Charges

[illegible]

Second Circular

[illegible]

International Advisory Committee

- [illegible]
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Local Organizing Committee

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Mailing Address

[illegible]

ITC - International Training Course

OUTLINE

Since 1972 the International Training Course (ITC) has been organised yearly in Szeged by the Biological Research Center (BRC). Since the foundation of BRC, most ITC fellows arrive from Central and East European countries, but we also had ITC fellows from Ireland, India, The Philippines, Australia and China.
ITC is dedicated to the exchange of knowledge and to the improvement of personal relations among young researchers. Besides providing the ITC fellows high level scientific education in English, the intense international activities in BRC laboratories may also offer an opportunity for ITC fellows to establish personal contacts with other foreign researchers.
ITC fellows will work in selected BRC laboratories on their own research projects under the guidance of BRC staff members for 11 months. Besides their research in the BRC laboratories, ITC fellows will attend lectures and practical demonstrations on selected topics of modern biology (biochemistry, biophysics, genetics and plant biology). The lectures of this study course will be held by invited speakers and BRC senior researchers. Practical demonstrations will be organized in BRC laboratories.

APPLICATIONS

Applicants should have a university degree (M.Sc./B.Sc. or equivalent) in natural sciences and an appropriate background in biology, chemistry, physics and mathematics. English knowledge is essential for the course and it should be appropriately documented in the application.
BRC will provide monthly scholarship for the ITC fellows as well as accommodation in the ITC guest house.
New courses start every year in October and last for 11 months. Applications should be sent on a special application form available on the INTERNET after March 15. The deadline of applications is May 31.

TOPICS

The topics for the 1999/2000 ITC course are the following:

1.2	Biochemistry, molecular biology, and biotechnology of thermotolerant hydrogenases
1.3	Intensification of biogas production by microbiological means
1.4	Biotechnology of methanotrophic bacteria
1.5	Biotechnological denitrification of industrial waste waters and drinking water
1.6	Biodegradation of hazardous chemicals
2	Interaction of nitric oxide with membranes
3	Cellular and molecular biology of hormone induced neuroglial plasticity
4.1	Single particle manipulation with laser tweezers
4.2	Nonlinear optical properties of bacteriorhodopsin
4.3	Motions of energy transducing proteins during function
5	Transcriptional regulation of cartilage-specific gene expression
6	Functional analysis of extracellular matrix proteins
7	Structural and functional analysis of opioid (morphine) receptors and ligands
8	Dna substrate recognition by type II restriction endonucleases and modification methyltransferases
9	Dynamics of phospholipids in biomembranes

Plant cell engineering [illegible]
[illegible] of genes
Stress tolerance [illegible] of Arabidopsis [illegible]
Cytokinin biosynthesis in [illegible] and [illegible]
[illegible] of the photosynthetic [illegible]
symbiotic nitrogen fixation
[illegible] genes [illegible] symbiotic [illegible]
[illegible] and function
Structure and dynamics of the [illegible] network
[illegible]
[illegible]
Protein [illegible] proteins
[illegible] of gene expression by [illegible]
[illegible]
[illegible] engineering and [illegible] of plants
[illegible] of gene expression
in plants
Growth and [illegible] in [illegible]
Regulation of [illegible] in [illegible]
Regulation of gene expression in higher plants
Influencing growth and development through foreign gene expression in transgenic plants
Isolation and analysis of the small gtpase rho genes from plants
Damaging effects of ultraviolet-B on plant photosynthesis

FURTHER INFORMATION

Detailed description of research topics and application forms are available
Dr. [illegible]
ITC Director
Biological Research Center
Hungarian Academy of Sciences
H-6701 Szeged, P.O.Box 521
Hungary
Fax: 00-36-62-433-434
E-mail: [illegible]
or:
Ms. Timea Varga
ITC Secretariat
Biological Research Center
Hungarian Academy of Sciences
H-6701 Szeged, P.O.Box 521
Hungary
E-mail: [illegible]

[illegible]

[illegible]

[illegible] Vaccine Production Facilities

1.

[illegible] Pharmaceutical Manufacturing Co.

H-2100 Gödöllő
Táncsics M. u. 82

H-1107 Budapest
Szállás u. 5

[illegible]

2.

National Epidemiological Centre "B. Johan"

H-1097 Budapest Gyáli út 2-6.

[illegible]

5.

CEVA-PHYLAXIA Ltd

H-1107 Szallas u 5, Budapest

CEVA-Phylaxia is producing veterinary biological products, including live attenuated and inactivated vaccines, hyperimmune sera, diagnostics, blood derivatives etc. concerning the following diseases and microorganisms:

Disease/Microorganism	O.I.E. list
Actinobacillus pleuropneumoniae	-
Aspergillus niger	-
Aujeszky's disease (pseudorabies) SHV-1	B2
Avian encephalomyelitis virus	-
Avian infectious bronchitis virus	B51
Avian infectious bursitis (gumboro disease) IBD	B59
Bacillus anthracis	-
Bacillus subtilis ATCC 6633	-
Bordetella bronchiseptica	B55
Bovine adenovirus 1	-
Bovine adenovirus 8	-
Bovine parainfluenza-3 virus	-
Bovine respiratory syncytial virus	-
Bovine rotavirus	-
Bovine virus diarrhoea (Mucosal disease) virus	B81
Brucella abortus	B12
Candida albicans	-
Canine distemper virus	-
Canine hepatitis CAV-1	-
Canine parvovirus	-
Chlamydia psittaci (ovine)	B68
Clostridium chauvoei	-
Clostridium novyi	-
Clostridium perfringens A	-
Clostridium perfringens C	-
Clostridium perfringens D	-
Clostridium septicum	-
Clostridium sordellii	-
Clostridium sporogenes	-
Contagious ecthyma virus	-
Coxiella burnetii	B3
Duck enteritis virus	B56
Duck hepatitis virus	B58
Duck parvovirus	-
EDS virus	-
Erysipelothrix rhusiopathiae	-
Escherichia coli	-
Fowl pox virus	B61
Goose parvovirus	-

Haemorrhagic disease of rabbits RHDV	B82
Infectious Bovine Rhinotracheitis virus	B19
Infectious bursitis virus	B63
Klebsiella sp.	
Leptospira pomona	B6
Leptospira hyos	-
Mycoplasma arginini	-
Mycoplasma arthritidis	-
Mycoplasma fermentans	-
Mycoplasma hominis	-
Mycoplasma meleagridis	-
Mycoplasma pneumoniae	-
Mycoplasma pulmonis	-
Myxomatosis virus	B68
Newcastle disease virus	A16
Pasteurella haemolitica	-
Pasteurella multocida (Fowl cholera)	B60
Pseudomonas aeruginosa	-
Pseudomonas mallei	-
Salmonella anatum	-
Salmonella choleraesuis	-
Salmonella typhimurium	-
Spherophorus necrophorus	-
Staphylococcus aurreus	-
Sheep adenovirus	-
Streptococcus pyogenes	-
Swine fever (Hog cholera) virus	A13
Yersinia ruckeri	

HUNGARY
Annex 13

Measure E
FORM E

Declaration of legislation, regulations and other measures

RELATING TO	LEGISLATION	REGULATIONS	OTHER MEASURES	AMENDED SINCE LAST YEAR
a. Development, production, stockpiling, acquisition of BTWC	YES[1]	NO	NO	NO
b. Exports of microorganisms* and toxins		YES[2]	NO	NO
c. Imports of microorganisms* and toxins		YES[2]	NO	NO

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1. Law Decree No.: 11/1975
2. Government Decree No.: 61/1991

* Micro-organisms pathogenic to human, animals and plants in accordance with the Convention

ITALY

10 April 2000

The Permanent Mission of Italy to the United Nations presents its compliments to the Secretariat of the United Nations and has the honour to submit the Italian Confidence-Building Measure Declaration for 1999 in accordance with the Third Review Conference of the Convention on the prohibition of the Development, Production and Stockpiling of Biological and Toxin Weapons and their destruction.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1 Declaration form on Nothing to Declare or Nothing new to Declare for use in the information exchange

Measure	Nothing to Declare	Nothing new to declare (*)
A, part 1	☐	☒
A, part 2(i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐ See enclosure	☐
B (ii)	☒	☐
C	☐	☒
D	☒	☐
E	☐	☒
F	☐	☒
G	☐ See enclosure	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date April 2000

State Party to the Convention ITALY

(*) Enclosures attached in previous returns and reattached for illustrative purposes

CONFIDENCE BUILDING MEASURE "A"

Part I. Exchange of data on research centre and laboratories

At the Third Review conference it was agreed that States Parties continue to implement the following:

Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialise in permitted biological activities directly related to the Convention."

Modalitie:

The Third Review Conference agreed that data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the 1983 WHO Laboratory Biosafety Manual such as those designated as biosafety level 4 (BL 4) or P4 or equivalent standards.

Form A, part 1
(i)

Exchange of data on research centres and laboratories[1]

1. Name(s) of facility[2] — **Servizio Biologico/Laboratorio di Biologia Cellulare**

2. Responsible public or private Organization or company — ***Istituto Superiore di Sanità***

3. Location and postal Address — **V.le Regina Elena, 299**
00161 – Roma

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Health (entirely)

5. Number of maximum containment unit[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

The containment unit previously classified as P4, must be reclassified according to International standards and technical improvement which require that P4 units should be located outside the normal working areas. Therefore, because the "P4" is located in the same building within other unclassified laboratory, it can be classified only as P3

6. If no maximum containment unit, indicate highes level of protection

Not applicable

7. Scope and general description of activities, including type (s) of micro-organisms and/or toxins as appropriate

The micro-organisms grown in this area require, at the moment, only the containment level 2

---

[1] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2] For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A part 1

Exchange of data on research centres and laboratories[1]

1. Name (s) of facility[2]

CHEMICAL PHISICAL BIOLOGICAL MILITARY TECHNICAL CENTER

2. Responsible public or private
organisation or company

PUBLIC / MINISTRY OF DEFENCE

3. Location and postal address

Via BRACCIANESE CLAUDIA, Km. 67.3 – 00053 CIVITAVECCHIA (RM)

4. Sources(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

TOTALLY FUNDED BY THE MINISTRY OF DEFENCE

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (mq)

//

6. If no maximum containment unit indicate highest level of protection

BL2 (BIOLOGICAL PROTECTION LEVEL)

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

activities carried out :

a. **a bibliographic study has been carried out to identify the most advanced detection techniques of Type B;**

b. **a molecular biology laboratory to identify agents of Type B is being set up; assessment of the microbial level in the air in confined areas;**

c. **resistance tests of TLC apparatuses on the following moulds:**
Aspergillus Niger, Aspergillus Versicolor, Chetonium Globosum;
Pennicillium Funiculosum, Aspergillus Flavus;
Candida utilis;
Rhodotorula mucillaginosa.

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[1] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately

[2] For facilities with maximum containment participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Part 2: Exchange of information on National Biological Defence Research and Development Program

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programs on biological defence, the States Parties will declare whether or not they conduct such programs. States Parties agreed to provide, annually, detailed information on their biological defence research and development programs, including summaries of the objectives and costs of efforts performed by contractors and in other facilities. If no biological defence research and development program is being conducted, a "null" report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

1. the objective and summary of the research and development activities under way, indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenecity and virulence diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;
2. whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the program;
3. the organizational structure of the program and its reporting relationships; and
4. the following information concerning the defence and other governmental facilities in which the biological defence research and development program is concentrated:
   - a. locations;
   - b. the floor areas (sqm) of the facilities including that dedicated to each of BL-2, BL-3 and BL-4 level laboratories;
   - c. the total number of staff employed, including those contracted full-time for more than six months;
   - d. numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;
   - e. a list of the scientific disciplines of the scientific/engineering staff;
   - f. the source and funding levels in the following three areas: research, development, and test and evaluation; and
   - g. the policy regarding publications and a list of publicly available papers and reports.

Form A: part 2 (i)

National Biological Defence Research and Development Program Declaration

1. Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere ? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

YES

If the answer to (1) is YES, complete **Form A: para 2 (ii)** which will provide a description of the program.

Form A: part 2 (iii)

National Biological Defence Research and Development Program

III. Facilities

Complete on form for each facility declared in accordance with paragraph 1 in form A, part 2 (ii)

In shared facilities, provide the following information for the biological defence research and development portion only

1. What is the name of the facility ?

CHEMICAL PHISICAL BIOLOGICAL MILITARY TECHNICAL CENTER

11. Where is it located (include both address and geographical location) ?

Via BRACCIANESE CLAUDIA, Km. 67.3 – 00053 CIVITAVECCHIA (RM)

12. Floor area of laboratory areas by containment level

BL2	700	(sqM)
BL3		(sqM)
BL4		(sqM)

Total laboratory floor area 700 (sqM)

13. The organisational structure of each facility

I) Total number of personnel 7

II) Division of personnel

Military	3
Civilian	4

III) Division of personnel by category

Scientist TECHNICAL OFFICERS	2
Engineers VETERINARY OFFICERS	0
Technicians	3
Support Staff	1

IV) List the scientific disciplines represented in the scientific / engineering staff

Degree in biological science: 2

V) Are contractor staff working in the facility ? If so, provide an approximate number

NO

Form A: part 2 (ii)

National Biological Defence Research and Development Program

II. Description

4. State the objectives and funding of the program and the summarise the principal research and development activities conducted in the program. Areas to be addressed shall include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

- **decontamination tests on material;**
- **laboratory detection of agents of type B;**
- **sampling of bacteria in the air (aerobiology).**

5. State the total funding for the program and its source.

Funded by Ministry of Defence

6. Are aspects of this program conducted under contract with industry, academic institutions, or other non defence facilities ?

NO

7. If YES, what proportion of the total funds for the program is expended in these contracted or other facilities ?

//

8. Summarise the objectives and research areas of the program performed by the contractors and in other facilities with the funds identified in para 4.

//

9. Provide a diagram of the organisational structure of the program and the reporting relationship (include individual facilities participating in the program)

//

10. Provide a declaration in accordance with **Form A: part 2 (iii)** for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

//

VI) What is/are the source (s) of funding the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence ?

TOTALLY FUNDED BY THE MINISTRY OF DEFENCE

VII) *What are the funding levels for the following programs areas*

Research	//
Development	//
Test and Evaluation	**X**

VIII) Briefly describe the publication policy of the facility

Handbooks and publications of exclusive use of the Ministry of Defence personnel.

IX) Provide a list of publicly available paper and reports resulting from the work during the previous 12 months (to include authors, titles and full references)

//

14 Briefly describe the biological defence work carried out at the facility, including type(s) of micro organisms[4] and /or toxins studied, as well as outdoor studies of biological aerosols.

Studies on, sprouting of moulds on various materials.

---

[4] including viruses and prions

FORM B (i)

Malattie	1990	1991	1992	1993	1994	1995	1996	1997	1998
Amebiasi	136	87	NN	NN	NN	NN	NN	NN	NN
Anchilostomiasi	13	11	NN	NN	NN	NN	NN	NN	NN
Blenorragia	578	487	447	372	330	317	365	327	[illegible]
Botulismo	28	31	28	39	26	41	58	43	[illegible]
Brucellosi	1571	1305	1192	1119	1314	1370	1598	1551	[illegible]
Carbonchio	6	8	NN	NN	NN	NN	NN	NN	NN
Congiuntivite	806	219	NN	NN	NN	NN	NN	NN	NN
Difterite	7	0	0	0	0	0	1	0	[illegible]
Diarrea infettiva	130	868	1208	1580	1687	1812	2088	[illegible]	[illegible]
Echinococcosi	98	42	NN	NN	NN	NN	NN	NN	NN
Epatite A	2572	2764	8046	3308	3531	1434	6.251	[illegible]	[illegible]
Epatite B	3040	3260	3423	3344	2723	2600	2.248	[illegible]	[illegible]
Epatite NANB	1832	1660	1902	1788	1569	1466	1.149	852	[illegible]
Epatite non specificata	1983	1383	1724	982	551	401	304	303	[illegible]
Febbre Q	21	11	NN	NN	NN	NN	NN	NN	NN
Febbre tifoide	1477	1394	1585	1194	1095	993	1302	807	[illegible]
Forme dermotifosimili	806	325	NN	NN	NN	NN	NN	NN	NN
Gastroenterite nel I° anno di vita	615	180	NN	NN	NN	NN	NN	NN	NN
Imenolepiasi	7	4	NN	NN	NN	NN	NN	NN	NN
Infezioni paratifi	984	223	NN	NN	NN	NN	NN	NN	NN
Infezioni salmonelle	18587	9038	23319	23386	21360	14658	16660	18020	[illegible]
Legionellosi	72	77	85	95	148	133	126	90	[illegible]
Leishmaniosi cutanea	38	50	38	16	22	35	33	23	

alattie	1990	1991	1992	1993	1994	1995	1996	1997	1998
ishmaniosi viscerale	43	67	110	90	95	111	145	136	112
ptospirosi	118	60	84	68	34	54	71	60	[illegible]
nfogranuloma ing.le	5	3	NN	NN	NN	NN	NN	NN	NN
eningite mening.	309	284	279	307	228	308	254	207	182
cosi della cute	1060	444	NN	NN	NN	NN	NN	NN	NN
[illegible] infettiva	4824	2877	NN	NN	NN	NN	NN	NN	NN
[illegible]	9227	23458	66013	16880	6158	37131	32.598	41.264	[illegible]
[illegible] virale	483	229	NN	NN	NN	NN	NN	NN	NN
[illegible]	45	30	NN	NN	NN	NN	NN	NN	NN
rotite epidemica	62841	41331	30166	29500	38438	65908	64.701	29.845	14733
rtosse	16887	10356	7055	4246	13360	14259	3.895	3.304	5861
eola	33579	14016	11146	33353	24332	6664	21.878	34.612	3318
[illegible]	1772	1773	NN	NN	NN	NN	NN	NN	NN
arlattina	14160	15467	18131	18777	19964	18692	25502	30753	24015
ide contagiosa	639	520	461	522	545	484	437	440	371
[illegible]	209	93	NN	NN	NN	NN	NN	NN	NN
[illegible]	123	58	92	90	102	136	105	103	107
[illegible]	2207	NN	NN	NN	NN	NN	NN	NN	NN
o esantematico	0	0	0	0	0	0	0	0	0
ssinfezioni alim.	1986	1023	NN	NN	NN	NN	NN	NN	NN
xoplasmosi	534	249	NN	NN	NN	NN	NN	NN	NN
chinosi	308	8	0	4	0	18	0	0	59
bercolosi extrapol.	808	538	862	948	1083	1433	1490	1402	1115
bercolosi pol.re	3578	3160	3823	3789	4124	3070	4022	4010	3880
laremia	55	8	4	5	3	4	10	14	21
ricella	88754	90152	116865	95068	108013	117730	104216	110077	111092

Dati Ministero della Sanità - Dip. Prevenzione - Ufficio Profilassi Malattie Infettive

Confidence Building Measure "E"

Declaration of Legislation Regulations and other Measures.

With Law n. 185 of 9 July 1990 on "New provisions governing the export, import and transit of armament" Italy has reiterated her commitment not to manufacture weapons of mass destruction. Chapter 1, Section 1, point 7 of that Law reads "The manufacture, import, export and transit of biological, chemical and nuclear weapons are prohibited, as is research designed for their production or the provision of the relevant technology".

Legislation on the matter also comprises:

Law n. 222 of 27 February 1992, partially replaced by Presidential Decree n. 89 of 24 February 1997, which enforces European Union Regulation n. 3381/94 dated 19 December 1994 and PESC Decision 94/942/PESC dated 19 December 1994 on export of dual use goods.

Form F

Declaration of past activities in offensive and /or defensive biological research and development program.

1. Date of entry into force of the Convention for the State party

   30 MAY 1975

15. Past offensive biological R and D programs

   - NO

   - Period(s) of activities:

   - Summary of the R and D activities indicating whether work was performed concerning production, test and evaluation, weaponization , stockpiling of biological agents, the destruction program of such agents and weapons, and other related research

16. Past defensive biological R and D programs

   - YES

   - Period(s) of activities **1991/1992**

   - Summary of the R and D activities indicating whether work was conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible

(No change from Declaration 1995)

The chemical-Physical Biological Center has carried out studies, experiments and biographical updating in the filed of biological defence.
in this context:

- **decontamination tests on materials have been carried out;**
- **histopathologic effects of CBR agents (in particular mustard gas and mycotoxins) on target organs have been examined by electronic and optical microscopy;**
- **studies have been initiated on the possibility of using cellular cultures in toxicological research.**

CONFIDENCE BUILDING MEASURE "F":

Declaration of past activities in offensive and/or defensive biological research and development programs

In the interest of increasing transparency and openness, State Parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programs since January 1946.
If so, States parties shall provide information on such programs, in accordance with Form F.

CONFIDENCE BUILDING MEASURE "G"

List of companies authorized to produce serums and vaccines.

1. **Aima Derivati S.p.A.**
a) Stabilimento sito in S. Rufina
Cittaducale (RI)

b) Stabilimento sito in s.s. 7 km 19,5 s. Antimo Napoli

c) Stabilimento sito in Lungarno Galilei 2 Pisa

2. **Alfa Biotec S.p.A.**
Stabilimento sito in via della Castagnetta 7 Pomezia (RM)

3. **Biocine S.p.A.**
Stabilimento sito in via Fiorentina, 1/a Siena

4. **Farma Biagini S.p.A.**
a) Stabilimento sito in S.Rufina Cittaducale (RI)

b) Stabilimento sito in Lungarno Galilei 2 Pisa

c) Stabilimento sito in s.s. 7 km 19.5 S.Antimo Napoli

5. **Immuno S.p.A.**
Stabilimento sito in Via G. Oliva 2 Ospedaletto (PI)

6. **Istituto Sierovaccinogeno Italiano ISI S.p.A.**
a) Stabilimento sito in s.s. 7 km 19,5 S.Antimo Napoli

b) Stabilimento sito in S.Rufina Cittaducale (RI)

c) Stabilimento sito in Lungarno Galilei 2 Pisa

7. **Istituto Sierovaccinogeno Pozzi S.p.A.**
Stabilimento sito in via Cassia Nord Monteriggioni (SI)

8. **Nuovo ISM S.r.l.**
Viale Tunisia 39 20124 Milano

9. **Sclavo S.p.A.**
Stabilimento sito in località Bellaria di Rosia Sovicille Siena

JAPAN

10 May 2000

In reference to the Final Declaration of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, I have the honour to transmit herewith the completed form for Japan on nothing to declare or nothing new to declare for use in the information exchange dated 15 April 2000.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Northing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☒	☐
A, part 2 (ii)	☒	☐
A, part 2 (iii)	☒	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☐	☐
D	☒	☐
E	☐	☒
F	☐	☐
G	☐	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 15 April 2000

State Party to the Convention: JAPAN

2. CONFIDENCE-BUILDING MEASURE "A"

Form A, Part 1

(1) Exchange of data on research centers and laboratories

1. Name(s) of facility Murayama Annex of National Institute of Infectious Diseases (former National Institute of Health)

2. Responsible public of private organization or company Ministry of Health and Welfare

3. Location and postal address Gakuen 4-7-1, Musashi murayama,
Tokyo 208-0011, JAPAN

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence.

Ministry of Health and Welfare

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size(m²).

Maximum containment unit contains one P4 laboratory, one P3 laboratory and their Supporting laboratories 2270.36 m² in totals.

6. If no maximum containment unit, indicate highest level of protection.

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate.

The maximum containment laboratory was established in 1980 to perform laboratory diagnosis of viral haemorrhagic fever such as Lassa, Marburg and Ebola, diseases. However, the laboratory has never been used for that original purpose because the neighboring residents protest against its operation.

Form A. Part 1

(2) Exchange of data on research centers and laboratories

1. Name (s) of facility RIKEN Tsukuba Institute

2. Responsible public or private organization or company RIKEN (The Institute of Physical and Chemical Research)

3. Location and postal address Koyadai 3-1-1, Tsukuba-shi
Ibaraki-ken, 305-0074, JAPAN

4. Source (s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence.

Financed by Science and Technology Agency; No funding by Defence Agency.

5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m^2).

2 units, 82 m^2 × 2

6. If no maximum containment unit, indicate highest level of protection.

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate.

Risk assessment of recombinant DNA Techniques using Retrovirus.

Form A. Part 2 (i)

National Biological Defenfce Research and Development Program Declaration

1) Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

NO

If the answer to (1) is Yes, complete Form A: part 2 (ii) which will provide a description of the program.

3. CONFIDENCE-BUILDING MEASURE "B"

Form B (i)

Background information on outbreaks of reportable infectious diseases

(1) Human diseases

Disease	Number of cases per year				
	1994	1995	1996	1997	1998
Cholera	90	306	40	89	61
Dysentery	1, 042	1, 062	1, 218	1, 301	1, 749
Typhoid fever	71	64	81	79	61
Paratyphoid fever	49	75	32	37	54
Smallpox	-	-	-	-	-
Epidemic typhus	-	-	-	-	-
Scalet fever	6	5	4	3	-
Diphtheria	1	1	1	1	3
Meningococcal meningitis	6	3	4	5	6
Plague	-	-	-	-	-
Japanese encephalitis	6	4	6	6	4
Acute poliomyelitis	1	1	-	-	-
Lassa fever	-	-	-	-	-
Enterohemorrhagic Escherichia coli	N. A.	N. A.	1, 287	1, 941	2, 077
Influenza	2, 404	22, 393	8, 774	8, 816	14, 778
Rabies	-	-	-	-	-
Anthrax	2	-	-	-	-
Infectious diarrhea	1	-	10	140	-
Whooping cough	145	226	183	42	43
Measles	1, 766	931	1, 640	899	761
Tetanus	44	45	44	47	47
Malaria	74	66	51	69	79
Tsutsugamushi	652	529	423	487	538
Filariasis	-	1	1		1
Schistosomiasis	2	N. A.	N. A.	N. A.	N. A.

Form B (i)

Background information on outbreaks of reportable infectious diseases

(2) Animal diseases

Disease	Number of cases per year								
	1991	1992	1993	1994	1995	1996	1997	1998	1999
Enzootic fever	6	0	0	0	0	0	242	8	-
Epidemic encephalitis	0	2	0	25	2	12	0	7	6
Anthrax	1	0	0	0	0	0	0	0	0
Blackleg	20	12	7	14	11	3	3	4	-
Brucellosis	1	1	0	0	1	0	0	0	0
Tuberculosis	35	14	6	11	10	8	2	1	37
Johne's disease	212	216	226	222	257	298	576	793	886
Piloplasmosis	92	56	1	0	3	0	0	0	0
Anaplasmosis	2	0	0	0	0	0	0	0	0
Equine infectious anemia	0	0	2	0	0	0	0	0	0
Hog cholera	179	5	0	0	0	0	0	0	0
Swine erysipelas	1, 993	1, 776	1, 782	2, 087	2, 380	1, 872	1, 546	1, 623	-
New Castle disease	57, 912	0	0	0	0	19	0	4	359
Pullorum disease	0	0	1, 219	0	0	0	0	0	0
Foul brood	522	415	565	652	661	474	509	263	348
Tetanus	36	46	44	38	39	58	65	88	64
Infectious bovine rhinotrachetis	369	715	267	800	858	1, 110	568	372	391
Warble infestation	0	0	0	0	0	4	25	0	0
Equine paratyphoid	10	0	0	24	14	15	52	80	5
Aujeszky's disease	639	354	51	91	545	181	14	520	74
Transmissible gastro-enteroptosis	0	75	0	75	750	10, 085	8, 069	1, 120	1, 122
Swine dysentery	767	698	188	213	28	206	26	319	542
Infectious bronchitis	49, 114	1, 800	20, 132	8, 747	62, 505	30, 261	5, 250	8, 046	10, 434
Infectious laryngotracheitis	1, 000	2, 080	27, 000	4, 180	25, 216	2, 343	2, 101	20	1, 600

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1. Time of cognizance of outbreak	NA
2. Location and approximate area affected	NA
3. Type of disease/intoxication	NA
4. Suspected sources of disease /intoxication	NA
5. Possible causative agent (s)	NA
6. Main characteristics of systems	NA
7. Detailed symptoms, when applicable	NA
-respiratory	NA
-neurological/behaviourial	NA
-intestinal	NA
-dermatological	NA
-nephrological	NA
-other	NA
8. Deviation (s) from the normal pattern as regards	NA
-type	NA
-development	NA
-place of occurrence	NA
-time of occurrence	NA
-symptoms	NA
-virulence pattern	NA
-drug resistance pattern	NA
-agent (s) difficult to diagnose	NA
-presence of unusual vectors	NA
-other	NA
9. Approximate number of primary cases	NA
10. Approximate number of total cases	NA
11. Number of deaths	NA
12. Development of the outbreak	NA
13. Measures taken	NA

4. CONFIDENCE-BUILDING MEASURES "C"

Encouragement of publication of results and promotion of use of knowledge

The Government of Japan maintain an open policy on the exchange of information on biological research, the results of such research being made freely available in all cases where the release is not prejudicial to vital national or commercial interests. This policy would apply to any research subject to the reporting in Forms A and B.

5. CONFIDENCE-BUILDING "D"

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

-name of the conference, etc.	NA
-arranging organization(s), etc.	NA
-time	NA
-place	NA
-main subject(s) for the conference, etc.	NA
-conditions for participation	NA
-point of contact for further information, registration, etc.	NA

2. Information regarding other opportunities

NA

6. CONFIDENCE-BUILDING MEASURE "E"

Form E

Declaration of Legislation, Regularation and Other Measures

Relating to	Legislation	Regulations	Other measures	Amended since last year
a) Development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I.	YES	YES	YES	NO
b) Exports of micro-organisms* and toxins	YES	YES	NO	NO
c) Imports of micro-organisms* and toxins	NO	NO	NO	NO

---

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

7. CONFIDENCE-BUILDING MEASURE "F"

Form F

Declaration of past activities in offensive and/or defensive biological research and development program

1. Date of entry into force of the Convention for the State Party

   June 8, 1982

2. Past offensive biological research and development programmes:

   -None

3. Past defensive biological research and development programmes:

   -None

8. CONFIDENCE-BUILDING MEASURE "G"

Form G

DECLARATION OF VACCINE PRODUCTION FACILITIES

No	Name of Facility	Location (mailing address)	General description of the types of diseases covered
1	CHIBA SERUM INSTITUTE	2-6-1, KONODAI ICHIKAWA CITY, CHIBA JAPAN	INFLUENZA, BOTULISM, TETANUS, DIPHTHERIA, JAPANESE ENCEPHALITIS, HEPATITIS A MEASLES, RUBELLA, PERTUSSIS
2	DENKA SEIKEN CO., LTD	3-4-2, KAYABA-CHO, NIHONBASHI, CHUO-KU TOKYO JAPAN	INFLUENZA, CHOLERA DIPHTHERIA, TETANUS JAPANESE ENCEPHALITIS PERTUSSIS, WEILS DISEASES, HEPATITIS A
3	THE KITASATO INSTITUTE	5-9-1, SHIROGANE MINATO-KU, TOKYO JAPAN	INFLUENZA, CHOLERA DIPHTHERIA, TETANUS, JAPANESE ENCEPHALITIS PERTUSSIS, MEASLES, MUMPS RUBELLA
4	TAKEDA CHEMICAL INDUSTRIES, LTD	4-1-1, DOSHOMACHI, CHUO-KU, OSAKA CITY JAPAN	DIPHTHERIA, TETANUS, JAPANESE ENCEPHALITIS PERTUSSIS, MEASLES, MUMPS RUBELLA
5	THE RESEARCH FOUNDATION FOR MICROBIAL DISEASES OF OSAKA UNIVERSITY	D66, 5-16, TSUKUMODAI, SUITA CITY, OSAKA, JAPAN	INFLUENZA, CHOLERA DIPHTHERIA, TETANUS JAPANESE ENCEPHALITIS, PERTUSSIS, MEASLES, MUMPS RUBELLA, VARICELLA HEPATITIS B
6	THE CHEMO-SERO-THERAPEUTIC RESEARCH INSTITUTE	1-6-1, OKUBO, KUMAMOTO CITY KUMAMOTO JAPAN	INFLUENZA, RABIES, CHOLERA DIPHTHERIA, TETANUS JAPANESE ENCEPHALITIS HEPATITIS B, PERTUSSIS, MUMPS, RUBELLA HEPATITIS A
7	SAIKIN KAGAKU INSTITUTE CO., LTD	5-12, HAYAMA-CHO, AOBA-KU, SENDAI CITY MIYAGI JAPAN	JAPANESE ENCEPHALITIS
8	JAPAN BCG LABOLATORY	4-2-6, KOHINATA, BUNKYO-KU, TOKYO JAPAN	TUBERCULOSIS
9	JAPAN POLIOMYELITIS RESEARCH INSTITUTE	5-34-4, KUMEGAWA-CHO, HIGASHIMURAYAMA CITY TOKYO JAPAN	POLIOMYELITIS
10	YOSHITOMI PHARMACEUTICAL INDUSTRYS, LTD	2-6-9, HIRANA-CHO, CHUO-KU, OSAKA CITY JAPAN	HEPATITIS B
11	MITSUBISHI CHEMICAL CORPORATION	2-2-24, HIGASHI-SHINAGAWA SHINAGAWA-KU, TOKYO JAPAN	HEPATITIS B
12	MEIJI MILK PRODUCTS CO., LTD.	1-26-11, MIDORI, SUMIDA-KU, TOKYO JAPAN	HEPATITIS B

LITHUANIA

14 April 2000

The Permanent Mission of Lithuania to the United Nations presents its compliments to the Under-Secretary General for Disarmament Affairs and has the honour to submit information as requested by the decisions of the Third Review Conference of the parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxic Weapons and on their Destruction.

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the informati
exchange

Measure	Nothing to Declare	Nothing new to declare
A, part 1	☐	☐
A, part 2 (i)	☒	☐
A, part 2 (ii)	☒	☐
A, part 2 (iii)	☒	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☐	☐
F	☒	☐
G	☒	☐

2. CONFIDENCE-BUILDING MEASURE "A":

Part 1: Exchange of data on research centres and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following:

> "Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialize in permitted biological activities directly related to the Convention."

Modalities

The Third Review Conference agreed that data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the 1983 WHO Laboratory Biosafety manual such as those designated as biosafety level 4 (BL4) or P4 or equivalent standards.

Form A, par

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Center for Control and Prophylaxis of Infectious Deseases, Laboratory of the Sector of Hazardous Infectious Desesases

2. Responsible public or private organization or company Health Ministry

3. Location and postal address
Kalvariju 153
Lt-2600 Vilnius
Lithuania

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or part financed by the Ministry of Defence

Health Ministry

5. Number of maximum containment units 3/ within the research centre and / or laboratory, with indication of their respective size (m^2)

None

6. If no maximum containment unit, indicate highest level of protection

Level 3

7. Scope and general description of activities, including type(s) of micro-organisms and / or toxins appropriate

Public health purposes: diagnosis of infectious deseases such as Cholera, Brucellosis, Listerios Legionellosis, Botulism and others.

1/ The containment units which are fixed patient treatment modules, integrated with laboratori should be identified separately.

[2] For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A, part

Exchange of data on research centres and laboratories 1/

8. Name(s) of facility 2/ National Veterinary laboratory

9. Responsible public or private organization or company National Veterinary Service

10. Location and postal address
J.Kairiūkďčio 10
2021 Vilnius
Lithuania

11. Source(s) of financing of the reported activity, including indication if the activity is wholly or partl financed by the Ministry of Defence
National Veterinary Service

12. Number of maximum containment units 3/ within the research centre and / or laboratory, with a indication of their respective size (m^2)
None

13. If no maximum containment unit, indicate highest level of protection
Level 2

14. Scope and general description of activities, including type(s) of micro-organisms and / or toxins ; appropriate
Rabies, Leptospyrosis, Anthrax, Tuberculosis, Brucelosis,
Salmonellosis and other viral and bacterial diseases of animals

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1/ The containment units which are fixed patient treatment modules, integrated with laboratorie should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defen research and development programme, please fill in name of facility and mark "Declared in accordan with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivale

Part 2: Exchange of information on national biological defence research and development programmes

At the Third Review Conference it was agreed that States Parties are to implement the following

In the interest of increasing the transparency of national research and development programmes on biological defence, the States Parties will declare whether or not they conduct such programmes. States Parties agreed to provide, annually, detailed information on their biological defence research and development programmes including summaries of the objectives and costs of effort performed by contractors and in other facilities. If no biological defence research and development programme is being conducted, a "null" report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

(1) the objective and summary of the research and development activities under way indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research;

(2) whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the programme;

(3) the organizational structure of the programme and its reporting relationships; and

(4) the following information concerning the defence and other governmental facilities in which the biological defence research and development programme is concentrated:

(a) location;

(b) t floor areas (sqM) of the facilities including that dedicated to each of BL2, BL3 and BL4 level laboratories;

(c) the total number of staff employed, including those contracted full time for more than six months;

(d) numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;

(e) a list of the scientific disciplines of the scientific / engineering staff;

(f) the source and funding levels in the following three areas: research, development, and test ar evaluation; and

(g) the policy regarding publication and a list of publicly-available papers and reports

Form A, part 2 (i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

Yes / [✓ No]

If answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research an development activities conducted in the programme. Areas to be addressed shall include: prophylaxis studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or i other non-defence facilities?

Yes/No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or othe facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in othe facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationshi (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental ar non-governmental, which has a substantial proportion of its resources devoted to the national biologic defence research and development programme, within the territory of the reporting State, or under jurisdiction or control anywhere.

Form A, part 2 (iii)

National biological defence research and development programme

Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii)

In shared facilities, provide the following information for the biological defence research and development portion only

1. What is the name of the facility?

2. Where is it located (include both address and geographical location)?

3. Floor area of laboratory areas by containment level:

BL2________________________ (sqM)
BL3________________________ (sqM)
BL4________________________ (sqM)
Total laboratory floor area ____ (sqM)

4. The organizational structure of each facility

(i) Total number of personnel ____________________________

(ii) Division of personnel:

Military ____________________________
Civilian ____________________________

(iii) Division of personnel by category:

Scientists ____________________________

Engineers ______________________________

Technicians ______________________________

Administrative and support staff ______________________________

(iv) List of scientific disciplines represented in the scientific engineering staff.

(v) Are contractor staff working in the facility? If so, provide an approximate number.

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

(vii) What are the funding levels for the following programme areas:

Research ______________________________

Development ______________________________

Test and evaluation ______________________________

(viii) Briefly describe the publication policy of the facility:

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms* and/or toxins studied, as well as outdoor studies of biological aerosols.

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* Including viruses and prions.

3. CONFIDENCE-BUILDING MEASURE "B":

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxin

At the Third Review Conference it was agreed that States Parties continue to implement th following:

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxin and on all such events that seem to deviate from the normal pattern as regards type, development, plac or time of occurrence. The information provided on events that deviate from the norm will include, a soon as it is available, data on the type of disease, approximate area affected, and number of cases

Modalities

The Third Review Conference agreed the following definition:

An outbreak or epidemic is the occurrence of an unusually large or unexpected number of cases of a illness or health-related event in a given place at a given time. The number of cases considered as unusu will vary according to the illness or event and the community concerned.

Furthermore, reference made to the following definitions:

An epidemic of infectious disease is defined as the occurrence of an unusually large or unexpecte number of a disease known or suspected to be of infectious origin, for a given place and time. It is usuall a rapidly evolving situation, requiring a rapid response (WHO internal document CDS/Mtg/82.1).

The occurrence in a community or region of cases of an illness, specific health-related behaviour, other health-related events clearly in excess of normal expectancy. The community or region, and the tin period in which the cases occur, are specified precisely. The number of cases indicating the presence of epidemic will vary according to the agent, size and type of population exposed, previous experience lack of exposure to the disease, and time and place of occurrence: epidemicity is thus relative to usu frequency of the disease in the same area, among the specified population, at the same season of the ye A single case of a communicable disease long absent from a population or first invasion by a disease n previously recognized in that area requires immediate reporting and full field investigation: two cases such a disease associated in time and place may be sufficient evidence to be considered an epidem (J.M.Last, A Dictionary of Epidemiology, Oxford University Press, New York, Oxford, Toronto, 1983.)

The Third Review Conference agreed on the following:

1. In determining what constitutes an outbreak States Parties are recommended to take guidance from the above.

2. Since no universal standards exist for what might constitute a deviation from the normal pattern, States parties agreed to utilize fully existing national reporting systems on human diseases as well as animal and plant diseases, where possible, and systems within the *WHO* to provide annual update of background information on diseases caused by organisms which meet the criteria for risk groups II, III and IV according to the classification in the 1983 WHO Laboratory Biosafety Manual, the occurrence of which, in their respective areas, does not necessarily constitute a deviation from normal patterns*

3. Exchange of data on outbreaks that seem to deviate from the normal pattern is considered particularly important in the following cases:

when the cause of the outbreak cannot be readily determined or the causative agent** is difficult to diagnose,

when the causative agent is exotic to a given region,

when the disease follows an unusual patter of development,

when the disease occurs in the vicinity of research centres and laboratories subject to exchange of data under item A,

when suspicions arise of the possible occurrence of a new disease.

4. In order to enhance confidence, an initial report of an outbreak of an infectious disease or a similar occurrence that deviate from the normal pattern should be given promptly after cognizance of the outbreak and should be followed up by annual reports.

To enable States Parties to follow a standardized procedure, the Conference has agreed that Form B (ii) should be used, to the extent information is known and/or applicable, for the exchange of initial as well as annual information.

5. In order to improve international cooperation in the field of peaceful bacteriological (biologic activities and in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions. Stat parties are encouraged to in invite experts from other States Parties to assist in the handling of outbreak, and to respond favourably to such invitations.

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* This information should be provided in accordance with Form B (i)

** It is understood that this may include organisms made pathogenic by molecular biolo techniques, such as genetic engineering.

Form B (i)

Background information on outbreaks of reportable infectious diseases

(1) Animal diseases

Diseases	1993	1994	1995	1996	1997	1998	1999
Foot and Mouth disease	last outbreak in 1982				-	-	-
Fowl plague	-	-	-	-	-	-	-
Hog cholera	last 4 cases in 1992			-	-	-	-
Newcastle disease	last case in 1989			-	-	-	-
Vesicular stomatitis	Never detected						
Swine vesicular disease	Never detected						
Rinderpest	Never detected						
Peste der pettits ruminants	Never detected						
Contagiuos bovine pleuropneumonia	Never detected						
Lumpy skin disease	Never detected						
Rift Valley disease	Never detected						
Blutangue	Never detected						
Sheep and goat pox	Never detected						
African horse sickness	Never detected						
African swine fever	Never detected						

Form B (i)

Background information on outbreaks of reportable infectious diseases

(1) Human diseases (number of cases per year)

Diseases	1993	1994	1995	1996	1997	1998	1999
Amebiasis	1	1	4	19	3	274	361
Botulism	34	29	40	19	16	13	21
Brucellosis	-	-	-	-	-	-	
Campylobacteriosis	-	-	-	-	-	119	201
Chancroid	-	-	-	-	-	-	-
Chicken-pox	7565	15829	21341	15626	17442	15453	17743
Chlamydial infections	-	-	-	-	-	398	477
Cholera	-	-	-	-	-	-	-
Diphteria	8	38	43	11	2	2	5
Giardiasis	-	-	-	-	-	-	-
Gonococcal infections	-		-	-	-	1387	1253
Gonoccocal ophtalmia neonatorum	-	-	-	-	-	-	
Bacterial meningitis caused by H. influenzae B (invasive)	-	-	-	-	-	91	106
Hepatitis A	3627	5146	5501	3704	2925	1434	266
Hepatitis B	470	517	528	518	432	470	375
Hepatitis C	33	37	92	101	112	111	120
Hepatitis non A- non B	-	-	-	-	-	-	
Hepatitis other unspecified viral	-	-	-	-	-	-	-
Legionellosis	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-
Listeriosis	-	-	-	-	-	-	-
Maliaria	8	7	4	12	15	4	8
Measles	249	286	191	35	30	18	23
Pneumococcal meningitis	-	-	-	-	-	-	-
Other bacterial meningitis	-	-	-	-	-	-	-
Viral meningitis	-	-	-	-	-	-	-
Meningococcal infections	161	148	124	119	92	61	75
Mumps	572	516	383	397	632	1875	5946
Paratyphoid	1	4	2	4	3	2	2
Pertussis	254	232	105	57	150	96	80
Plague	-	-	-	-	-	-	-
Poliomyelitis	-	-	-	-	-	-	-
Rabies	1	-	-	-	1	-	-
Rubella	1128	9740	22269	1321	981	755	1322
Congenital rubella	-	-	-	-	-	-	-
Salmonellosis	1570	1910	2488	1966	1990	2548	1460
Shingellosis	50007	2378	5295	2605	2025	1771	1543
Syphilis, Congenital	-	-	-	-		13	-
Syphilis, Early Latern	-	-	-	-	-	2058	1676
Other Syphilis	-	-	-	-	-	-	-
Tetanus	4	2	-	2	3	2	6

Trichinellosis	430	718	402	190	219	156	63
Tuberculosis	774	1021	1069	1206	1240	1250	1134
Typhoid	18	10	12	15	11	4	7
Verotoxigenic E.coli infection 0157	-	-	-	-	-	-	1
Yellow Fever	-	-	-	-	-	-	-

Form B

Background information on outbreaks of reportable infectious diseases

-

-

(1) Human diseases (outbreaks)

Diseases	1993	1994	1995	1996	1997	1998	199
Shingellosis	7	5	15	13	11	13	15
Salmonellosis	1	4	10	10	7	11	6
Trichinellosis	85	101	72	46	28	21	1
Botulism	5	9	8	1	4	4	4
Tick-borne encephalities	-	-	-	4	4	2	1

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1. Time of cognizance of the outbreak ....
2. Location and approximate area affected ....
3. Type of disease/intoxication ....
3. Suspected source of disease/intoxication ....
5. Possible causative agent(s) ....
6. Main characteristics of systems ....
7. Detailed symptoms, when applicable
   - respiratory ....
   - circulatory ....
   - neurological/behavioural ....
   - intestinal ....
   - dermatological ....
   - nephrological ....
   - other ....
8. Deviation(s) from the normal pattern as regards
   - type ....
   - development ....
   - place of occurrence ....
   - time of occurrence ....
   - symptoms ....
   - virulence pattern ....
   - drug resistance pattern ....
   - agent(s) difficult to diagnose ....
   - presence of unusual vectors ....
   - other ....

9. Approximate number of primary cases ....

10. Approximate number of total cases ....

11. Number of deaths ....

12. Development of the outbreak ....

13. Measures taken ....

Lithuania

4. CONFIDENCE-BUILDING MEASURE „C"

Encouragement of publication of results and promotion of use of knowledge

At the Third Review Conference it was agreed that States parties continue to implement the following:

„Encouragement of publication of results of biological research directly related to the Convention, in scientific journals generally available to States parties, as well as promotion of use for permitted purposes of knowledge gained in this research."

Modalities

The Third Review Conference agreed on the following:

1. It is recommended that basic research in bio-sciences, and particularly that directly related to the Convention should generally be unclassified and that applied research to the extent possible, without infringing on national and commercial interests, should also be unclassified.

2. States parties are encouraged to provide information on their policy as regards publication of results of biological research, indicating, inter alia, their policies as regards publication of results of research carried out in research centres and laboratories subject to exchange of information under item A and publication of research on outbreaks of diseases covered by item B, and to provide information on relevant scientific journals and other relevant scientific publications generally available to States parties.

3. The Third Review Conference discussed the question of co-operation and assistance as regards the safe handling of biological material covered by the Convention. It concluded that other international forums were engaged in this field and expressed its support for efforts aimed at enhancing such co-operation.

4 CONFIDENCE-BUILDING MEASURE „D"

- Active promotion of contacts

At the Third Review Conference it was agreed that States parties continue to implement the following:

„Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis."

Modalities

The Third Review Conference agreed on the following:

In order to actively promote professional contacts between scientists, joint research projects and other activities aimed at preventing or reducing the occurrence of ambiguities, doubts and suspicions and at improving international co-operation in the field of peaceful bacteriological (biological) activities, States parties are encouraged to provide information, to the extent possible:

- on planned international conferences, seminars, symposia and similar events dealing with biological research directly related to the Convention,

- on other opportunities for exchange of scientists, joint research or other measures to promote contacts between scientists engaged in biological research directly related to the Convention.

To enable States parties to follow a standardised procedure, the Third Review Conference has agreed that Form D should be used for exchange of information under this item.

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided.

- name of the conference, etc ....
- arranging organisation(s), etc ....
- time ....
- place ....
- main subject(s) for the conference, etc ....
....
- conditions for participation ....
....
- point of contact for further information, registration, etc ....
....
....

2. Information regarding other opportunities

....
....
....

6. CONFIDENCE-BUILDING MEASURE „E"

- Declaration of legislation, regulations and other measures

At the Third Review Conference the States parties agreed to implement the following:

As an indication of the measures which they have taken to implement the Convention, States parties shall declare whether they have legislation, regulations or other measures:

(a) to prohibit the development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery, specified in Article I of the Convention, within their territory or anywhere under their jurisdiction or control;

(b) in relation to the export or import of micro-organisms pathogenic to man, animals and plants or of toxins in accordance with the Convention.

States parties shall complete the attached form (Form E) and shall be prepared to submit copies of the legislation or regulations, or written details of other measures on request to the United Nations Department for Disarmament Affairs or to an individual State party. On an annual basis States parties shall indicate, also on the attached form, whether or not there has been any amendment to their legislation, regulations or other measures.

Form E

Declaration of legislation, regulations and other measures

Relating to		Legislation	Regulations	Other measures	Amended since last year
(a)	Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	[✓ YES]/NO	YES/[✓ NO]	YES/[✓ NO]	YES/NO
(b)	Exports of micro-organisms* and toxins	[✓ YES]/NO	[✓ YES]/NO	[✓ YES]/NO	YES/NO
(c)	Imports of micro-organisms* and toxins	[✓ YES]/NO	[✓ YES]/NO	[✓ YES]/NO	YES/NO

- Article 137 of the Constitution of the Republic of Lithuania stipulates that weapons of mass destruct may not be stationed on the territory of the Republic of Lithuania.
- Law on the Control of Arms and Ammunitions adopted on 2 July 1996, Article 13 prohibits nucl radioactive, chemical, biological or other weapons of mass destruction placement on the territory of Republic of Lithuania.
- The Law on the Control of Export, Import and Transit of Strategic Goods and Technology adopted July 1995 sets forth control and regime and terms under which export, import and transit of strat goods and technologies to be placed in the Republic of Lithuania.

7 CONFIDENCE-BUILDING MEASURE „F"

- Declaration of past activities in offensive and/or defensive biological research and development programmes

In the interest of increasing transparency and openness, States parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programmes since 1 January 1946.

If so, States parties shall provide information on such programmes, in accordance with Form F

Form F

Declaration of past activities in offensive and/or defensive biological research and developme
programmes

1. Date of entry into force of the Convention for the State party 1998 02 10

2. Past offensive biological research and development programmes:

- YES [✓ NO]

- Period(s) of activities

- Summary of the research and development activities indicating whether work was performe concerning production, test and evaluation, weaponization, stockpiling of biological agents, t destruction programme of such agents and weapons, and other related research

3. Past defensive biological research and development programmes:

- Yes [✓ NO]

- Period(s) of activities

- Summary of the research and development activities indicating whether or not work w conducted in the following areas: prophylactic, studies on pathogenecity and virulence, diagnos techniques, aerobiology, detection, treatment, toxicology, physical protection, decontaminati and other related research, with location if possible

Lithuania

8. CONFIDENCE-BUILDING MEASURE „G"

- Declaration of vaccine production facilities

To further increase the transparency of biological research and development related to the Convention and to broaden scientific and technical knowledge as agreed in Article X, each State party will declare all facilities, both governmental and non-governmental, within its territory or under its jurisdiction or control anywhere, producing vaccines licensed by the State party for the protection of humans. Information shall be provided on Form G attached.

Form G

Declaration of vaccine production facilities

1. Name of facility:
2. Location (mailing address):
3. General description of the types of diseases covered:

MALTA

10 April 2000

The Permanent Mission of Malta to the United Nations presents it compliments to the Department of Disarmament Affairs and has the pleasure to attach herewith, in pursuance of the decisions taken at the Third and Fourth Review Conferences of the Bacteriological and Toxin Weapons Convention, documentation from the Department of Public Heath of Malta on Notifiable Infectious Diseases.

Section A: **Confirmed individual case reports, by sex and by quarter.**
(Q1 - Jan-Mar ; Q2 - Apr-Jun ; Q3 - Jul-Sep ; Q4 - Oct-Dec)

Notifiable Disease		Total	M	F	Q1	Q2	Q3	Q4
Acute Flaccid Paralysis		5	3	2	1	2	-	2
Acute Viral Encephalitis		2	2	-	1	-	1	-
AIDS	1	5	4	1	2	2	1	-
Chickenpox	2	267	140	127	31	79	42	115
Shingles, *Herpes zoster*		20	10	10	10	4	5	1
Herpes Simplex		1	-	1	1	-	-	-
Erysipelas		3	1	2	2	-	1	-
Food Poisoning, *Campylobacter*		11	5	6	3	5	-	3
Food Poisoning, *E. Coli*		1	1	-	-	1	-	-
Food Poisoning, *Salmonella*	3	58	34	24	4	18	19	17
Food Poisoning, *Shigella*		1	-	1	-	-	-	1
Food Poisoning, Toxic		1	1	-	-	-	1	-
Food Poisoning, Unspecified	4	85	35	50	19	16	36	14
Hepatitis A	5	2	1	1	-	-	2	-
Hepatitis B	5	4	3	1	2	-	1	1
Hepatitis C		2	2	-	1	1	-	-
Legionnaire's Disease		3	1	2	-	-	1	2
Leishmaniasis, Cutaneous		14	8	6	4	2	5	3
Leishmaniasis, Visceral		8	5	3	-	3	3	2
Malaria (exogenous)	6	1	1	-	-	-	1	-
Measles		1	1	-	-	1	-	-
Meningitis, (Other bacterial)	6	14	8	6	1	2	7	4
Meningitis, *Meningococcal*		4	3	1	1	2	1	-
Septicaemia, *Meningococcal*		19	11	8	7	3	5	4
Mumps		98	46	52	5	35	38	20
Rubella		8	5	3	1	6	-	1
Scarlet Fever		2	-	2	1	-	-	1
Tuberculosis, Non-Pulmonary	6	3	2	1	-	1	2	-
Tuberculosis, Pulmonary	1	19	16	3	1	10	2	6
Typhus, Murine		44	30	14	2	3	25	14
Typhus, Tick-borne		17	8	9	-	5	9	3
Whooping Cough		60	21	39	2	39	16	3

Notes to Section A

1. of these, 4 cases occured in non-residents and were imported
2. of these, [illegible] cases occured in non-residents, 4 of which were imported
3. of these, 7 cases occured in non-residents, 1 of which was imported
4. of these, 11 cases occured in non-residents, 2 of which were imported. Also 2 other cases in Maltese residents were imported
5. of these, 1 case was imported
6. of these, 1 case occured in a non-resident and was imported

The figures in brackets indicate the number of implicated outbreaks

Outbreak Type	Total	M	F	Q1	Q2	Q3	Q4
Food Poisoning, *Salmonella*	260 (18)	138	122	12 (3)	10 (4)	150 (7)	88 (4)
Food Poisoning, Toxic	4 (2)	2	2	- (-)	2 (1)	2 (1)	- (-)
Food Poisoning, Unspecified	118 (29)	60	58	15 (5)	28 (4)	40 (10)	35 (10)
Hepatitis A	3 (1)	2	1	3 (1)	- (-)	- (-)	(-)

Notes to Section B

1. Of these 40 cases occurred in non-residents
2. Of these, [illegible] cases occurred in non-residents

Section C: Deaths from Notifiable Infectious Diseases

During 1999 there were 9 deaths from notifiable infectious diseases (8) of which occured in Maltese residents. The cause of these deaths was as follows

Notifiable Disease	Total number of Deaths
AIDS	1
Leishmaniasis, Visceral	1
Meningitis, *Meningococcal*	1
Septicaemia, *Meningococcal*	4
Tuberculosis, Pulmonary	2

Notes to Section C

This death occurred in a non-resident

Dr M Micallef
Director, Public Health

These tables have been compiled by the Disease Surveillance Branch. The data presented is in respect of cases which have been confirmed following investigation by the Medical Officers of Health at the Disease Surveillance Branch. Notifiable infectious diseases are reported to the Disease Surveillance Branch by medical practitioners, the Microbiology and Virology Laboratories at St Luke's Hospital, [illegible] Hospital and other diagnostic laboratories.

NETHERLANDS

14 April 2000

The Permanent Mission of the Kingdom of the Netherlands to the United Nations presents its compliments to the Centre for Disarmament Affairs and has the honour to present to the Centre for Disarmament Affairs the Netherlands returns over 1999 on Confidence Building Measures in the framework of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons.

CONFIDENCE BUILDING MEASURES

in the framework of the

CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS

THE NETHERLANDS

10 APRIL 2000

I Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1		
A, part 2 (i)		X
A, part 2 (ii)		
A, part 2 (iii)		
B (i)		
B (ii)		
C		
D		X
E		X
F		X
G		

Date : 7 April 2000

State Party to the Convention : the Netherlands

Form A, part 1 (I)

Exchange of data on research centres and laboratories[1]

1. Name(s) of facility[2]

   TNO Prins Maurits Laboratory
   Division Toxic Substances

2. Responsible public or private organization or company

   Netherlands Organisation for Applied Scientific Research (TNO)

3. Location and postal address

   Lange Kleiweg 137
   P.O. Box 45
   2280 AA Rijswijk
   The Netherlands

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   Financed mostly by the Ministry of Defence

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   None

6. If no maximum containment unit, indicate highest level of protection

   BL-2 (FIN-1)

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately

[2] For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

7 Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Development and testing of detection equipment using the bacterial simulants Erwina herbicola, the viral simulant MS2, DNA strains of Bacillus anthraci, killed spores of Bacillus anthracis Ames, Stern and Vollum-1b and Escherichia coli K12 XL-1-blue and XL10-gold as well as Staphylococcal enterotoxin B.

Analysis of biological warfare agents with advanced mass spectrometry dealing with conotoxin, apamine, cholera toxin, tetanus toxin, botulinum toxin and Staphylococcal enterotoxin B. Filtration and mask leakage testing with Bacillus subtilus var. niger, the bacterial weapons simulants Erwina herbicola and Escherichia coli K12 XL-1-blue and XL-gold as well as the viral simulant MS2.

Development of treatment techniques against poisoning by toxins such as saxotoxin, tetrodotoxin, mu-conotoxin, palytoxin and a bacterial model Escherichia coli K12 XL-1-blue and XL10-gold.

Form A, part 1 (ii)

Exchange of data on research centres and laboratories[4]

1 Name(s) of facility[5]

TNO Prevention and Health: Division of Immunological and Infectious Diseases

2 Responsible public or private
organization or company

Netherlands Organisation for Applied Scientific Research (TNO)

3 Location and postal address

Zernikedreef 9
P.O Box 2215
2301 CE Leiden
The Netherlands

4 Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Defence

5 Number of maximum containment units[6] within the research centre and/or laboratory, with an indication of their respective size (m^2)

None

6 If no maximum containment unit, indicate highest level of protection

BL-3 (FIN-2)

---

[4] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[5] For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 1 (ii)".

[6] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Development of rapid detection techniques for biological agents
Development of an oral vaccine against inhalation anthrax
Development of passive immunization methods

Agents: Bacillus anthracis, Pseudomonas spp, Shigella spp + toxin, Chikungunga virus, Campylobacter spp, Legionella spp, Klebsiella, Staphylococcus +SEB, Vibro cholerae, and killed organisms

Form A, part 1 (III)

Exchange of data on research centres and laboratories[7]

1 Name(s) of facility[8]

National Institute of Public Health and the Environment (RIVM).
Foundation for the Advancement of Public Health and Environmental Protection (SVM)

2 Responsible public or private organization or company

Ministry of Health, Welfare and Sport

3 Location and postal address

Antonie van Leeuwenhoeklaan 9, Bilthoven

Postal address:
PO Box 1
3726 BA Bilthoven
The Netherlands
Internet address: http://www.rivm.nl

4 Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Health, Welfare and Sport. No funding by the Ministry of Defence

5 Number of maximum containment units[9] within the research centre and/or laboratory, with an indication of their respective size (m^2)

None

6 If no maximum containment unit, indicate highest level of protection

BL-3

---

[7] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[8] For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[9] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

5. Number of maximum containment units[12] within the research centre and/or laboratory, with an indication of their respective size (m^2)

One containment unit on which WHO P4-level is applicable.

Houtribweg: one P4 maximum containment unit compromising 15 laboratories, 2 vaccine-production units, 33 containment stables for animal experiments (pigs, cows, sheep, goats, horses), 4 poultry houses, 36 negative-pressure isolators for poultry, 5 isolators for pigs or calves. 4 containment stables have additional facilities for experiments with genetically modified micro-organisms in large animals (risk-assessment of genetically engineered vaccines), class II laminar flow cabinets.

6. If no maximum containment unit, indicate highest level of protection

Edelhertweg: secondary containment.

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Veterinary medicine: mechanisms of pathogenesis; vaccines; host-pathogen relationships; host resistance; diagnosis of foot-and-mouth disease, swine fever and rabies; production of foot-and-mouth disease vaccine; production of Mycobacterium bovis tuberculine; recombinant-DNA technology; genetically engineered vaccines. Zootechnology: behaviour, stressphysiology and management; animal breeding and genetics; reproduction; nutrition; meat technology.

---

[12] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 2 (i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, detection, treatment, toxicology, physical protection, decontamination and other related research

Yes

Form A, part 2 (ii)

National biological defence research and development programme

A. *TNO Prins Maurits Laboratory*
Division Toxic Substances

1.1 State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

The objective of the programme is to provide the Netherlands Armed Forces with adequate expertise and equipment in the framework of the passive defence (threat assessment, prophylaxis, detection and identification, physical and medical countermeasures as well as decontamination) against the threat of biological warfare (BW) agents and mid-spectrum agents. The programme is funded mainly by the Netherlands Ministry of Defence. A limited amount of other funding is obtained from industry and own resources of TNO.

2. State the total funding for the programme and its source.

The total funding of the BW defence programme amounts to US M$ 1.5

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

A very limited amount.

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

Currently less than 5%.

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

General context is also defence against biological warfare agents and mid-spectrum agents.

7 Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Public health purposes: diagnosis and epidemiology of infectious diseases; vaccine development (meningococci, pneumococci, H. influenzae, respiratory syncitial virus). Recombinant DNA techniques are used for the development of diagnostic reagents and human vaccines. Host/vector systems for rDNA techniques include E.coli carrying genes from Bordetella pertussis, Treponema pallidum, Mycobacterium bovis and Streptococcus pneumoniae, and Vaccinia virus carrying genes from HIV-1.

Form A, part 1 (IV)

Exchange of data on research centres and laboratories[10]

1. Name(s) of facility[11]

   Institute for Animal Science and Health (ID-Lelystad)

2. Responsible public or private organization or company

   The Agricultural Research Department (DLO)

3. Location and postal address

   Houtribweg 39, Lelystad
   Postal address:
   PO Box 65
   8200 AB Lelystad
   The Netherlands

   Edelhertweg 15, Lelystad
   Postal address:
   PO Box 65
   8200 AB Lelystad
   The Netherlands

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   Ministry of Agriculture and partially financed by industry (contract research)
   No funding by Ministry of Defence

---

[1] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2] For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

(iii) Division of personnel by category

Scientists	*3*
Technicians	*6*
Administrative and support staff	*general support*

(iv) List the scientific disciplines represented in the scientific/engineering staff

Chemistry, analytical chemistry, toxicology, immunology, molecular biology, medical biology, biochemistry, chemical engineering

(v) Are contractor staff working in the facility? If so, provide an approximate number

No

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry Defence?

Ministry of Defence – 95%
Industry and own resources – 5%

(vii) What are the funding levels for the following programme areas

Research	*60%*
Development	*35%*
Test and evaluation	*5%*

(viii) Briefly describe the publication policy of the facility.

R&D results through hierarchy to Research Director of TNO Prins Maurits Laboratory, and to the Assignor (mostly Ministry of Defence). Subjects of general or scientific interest may be published in the open literature if the Assignor agrees.

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months (to include authors, titles and full references)

C.E. Kientz, A.G. Hulst, E.R.J. Wils, "Determination of Staphylococcal Enterotoxin B by on-line (micro)liquid chromatography-electrospray mass spectometry", J. Chromatography A 757, 51-64 (1997). "Detection of Staphylococcal Enterotoxin B employing a piezoelectric crystal immunosensor", Biosensors and Bioelectronics 12, 661-667 (1997).B.L.M. van Baar, A.G. Hulst, E.R.J. Wils, "characterisation of cholera toxin by liquid chromatography - electrospray mass spectrometry", Toxicon 37, 85-108 (1999).

5 Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

See form A Part 1 and form A part 2 (ii)

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* Including viruses and prions

National biological defence research and development programme

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

TNO Prevention and Health, Division of Immunological and Infectious Diseases

2. Where is it located (include both address and geographical location)?

Zernikedreef 9, Leiden
P.O.Box 2215
2301 CE Leiden
The Netherlands
(10 km north of The Hague)

3. Floor area of laboratory areas by containment level:

BL-2 *96 sqM*
BL-3 *48 sqM*
BL-4 -

Total laboratory floor area *144 sqM*

4. The organizational structure of each facility.

(i)	Total number of personnel	*8*
(ii)	Division of personnel:	
	Military	*0*
	Civilian	*8*
(iii)	Division of personnel by category:	
	Scientists	*3*
	Technicians	*4*
	Administrative and support staff	*1*

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology, immunology, molecular biology, medical biology, biochemistry

(v) Are contractor staff working in the facility? If so, provide an approximate number

No

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Ministry of Defence 100%

(vii) What are the funding levels for the following programme areas

Research	*70%*
Development	*20%*
Test and evaluation	*10%*

(viii) Briefly describe the publication policy of the facility

Scientific results from research carried out at the facility are published in international scientific literature. Some results from development are published in company reports.

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references)

Philip J. van Dalen, Outbreaks of Disease: current European Reporting. Briefing Paper No. 24, University of Bradford, September 1999.

Zegers N.D., Kluter E., Van der Stap H., Van Dura E., Van Dalen P., Shaw M. and Baillie L. Expression of the protective antigen of Bacillus anthracis *by* Lactobacillus casei: *towards the development of an oral vaccine against anthrax.* J Appl Microbiol *1999 Aug; 87(2): 309-314*

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

See form A, Part 1

---

* Including viruses and prions

Form B (i)

Background information on outbreaks of reportable infectious diseases

Human diseases

Human Disease	Number of cases per year				
	1995	1996	1997	1998	1999
Typhoid Fever	63	43	39	24	36
Lassa Fever and other forms of African viral hemorr. fever	-	-	-	-	-
Plague	-	-	-	-	-
Acuta	-	-	-	-	-
Rabies	1	-	-	-	-
Anthrax	-	-	-	-	-
Brucelloses	3	4	3	2	1
Botulism	-	-	-	-	-
Cholera	9	3	2	4	2
Diphtheria	1	-	1	-	1[1]
Dysenteria Bacillaris	379	326	408	382	336
Febris Recurrens	-	-	-	-	-
Yellow Fever	-	-	-	-	-
Hepatitis A	998	735	873	1242	688
Hepatitis B	236	235	265	277	677
Legionella Pneumonia	42	40	48	44	264

---

[1] Cutane diphtheria

Lepra	18	7	5	-	-[2]
Leptospiroses	27	9	16	23	31
Malaria	313	308	223	250	264
Meningitis cer Epidemica	231	235	491	505	531
Meningococco Sepsis	234	247			
Morbilli	184	57	21	9	2371
Ornithosis Psittacosis	70	56	28	26	25
Paratyphoid Fever B	11	14	14	9	26[3]
Poliomyelitis ant	-	-	-	-	-
Pertussis	301	2655	3947	2252	6280
Atypical Pertussis	20	123			
Q-fever	27	15	16	9	6
Rubella	21	39	19	18	3
Scabies	1244	1303	978	1119	100
Tetanus	3	1	5	-	-
Trichinosis	-	-	-	-	2
Tuberculosis	1619	1678	1477	1189[4]	1181
Tularaemia	-	-	-	-	-
Typhus Exanthematicus	-	-	-	-	-
Foodborne Infection	575	786	563	546	265

---

[2] Reportable in The Netherlands until 1-4-1999

[3] Paratyphoid fever A 6 (1999)
Paratyphoid fever C 0 (1999)
(Paratyphoid fever A and C are reportable in The Netherlands as from 1-4-1999)

[4] This is an estimation .

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1	Time of cognizance of the outbreak	*19 - 28 February 1999*
2	Location and approximate area affected	*Flower show 'the Westfriese Flora' in Bovenkarspel (a village in the province of Noord-Holland, the north western part of the Netherlands)*
3	Type of disease/intoxication	*LEGIONELLOSIS*
4	Suspected source of disease/intoxication	*a whirlpool*
5	Possible causative agent(s)	*L. pneumophila*
6	Main characteristics of systems	
7	Detailed symptoms, when applicable	
	- respiratory	X
	- circulatory	
	- neurological/behavioural	
	- intestinal	
	- dermatological	
	- nephrological	
	- other	
8	Deviation(s) from the normal patterns as regards	
	- type	
	- development	
	- place of occurrence	
	- time of occurrence	

	- symptoms	
	- virulence pattern	X
	- drug resistance pattern	
	- agent(s) difficult to diagnose	
	- presence of unusual vectors	
	- other	
8	Approximate number of primary cases	
9	Approximate number of total cases	*185*
10	Number of deaths	*24*
11	Development of the outbreak	
12	Measures taken	*A wide range of measures has been taken by the Netherlands government to further the prevention of legionellosis, including regulatory measures to prevent legionellosis in tap water, arrangements have been made to improve and adapt the early warning capacity of surveillance systems in the Netherlands.*

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1	Time of cognizance of the outbreak	*April 1999 - March 2000*
2	Location and approximate area affected	*Religious communities with unvaccinated people, especially living in the "Bible Belt", stretching from the south-west to the north-east of the Netherlands*
3	Type of disease/intoxication	*MEASLES*
4	Suspected source of disease/ intoxication	
5	Possible causative agent(s)	*Morbelli virus*
6	Main characteristics of systems	
7	Detailed symptoms, when applicable	
	- respiratory	*Pneumonia (n=30)*
	- circulatory	*Encephalitis (n=4)*
	- neurological/behavioural	*Dehydration (n=5)*
	- intestinal	*Otitis media (n=2)*
	- dermatological	
	- nephrological	
	- other	
8	Deviation(s) from the normal patterns as regards	
	- type	
	- development	
	- place of occurrence	
	- time of occurrence	
	- symptoms	
	- virulence pattern	

	- drug resistance pattern	
	- agent(s) difficult to diagnose	
	- presence of unusual vectors	
	- other	
9	Approximate number of primary cases	*21?*
10	Approximate number of total cases	*unknown*
11	Number of deaths	*3*
12	Development of the outbreak	*ending March 2000*
13	Measures taken	*none*

Form B (i)

Background information on outbreaks of reportable infectious diseases

Animal diseases

Animal Disease	Number of cases per year				
	1995	1996	1997	1998	1999
Food-and-mouth disease	-	-	-	-	-
Anthrax (all cattle)	-	-	-	-	-
Hog cholera	-	-	424	5	-
Pseud. fowl plague	5	2	1	-	1 (ornamental birds)
Rabies	-	-	-	-	-
African Swine fever	-	-	-	-	
African foul brood	4	-	1	21	11
Infectious anaemia	-	-	-	-	-
Rabies (bats)	3	5	13+1	7	5
Salmonella enteritidis	39	35	23	13	23
Vesicular swine fever	3	-	-	-	-

Form C

Encouragement of publication of results and promotion of use of knowledge

- *The Netherlands has legal obligations on publication of results of scientific research.*
- *There are no restrictions whatsoever on the publication of results of scientific research.*
- *Publication takes place in (inter)national scientific manuals, journals, magazines and other sources.*
- *An overview of outbreaks of infectious diseases is regularly reported in a bulletin, overviews and inquiries to the public and to whom it may concern (inter)nationally (see also* http://www.rivm.nl).

Form G

Declaration of vaccine production facilities

1 Name of facility:

Fort Dodge Animal Health Holland

2 Location (mailing address):

P.O. Box 36
1380 AA Weesp
The Netherlands

3 General description of the types of diseases covered:

Veterinarian diseases

Declaration of vaccine production facilities

1 Name of facility:

Solvay Pharmaceuticals b.v. Weesp

2 Location (mailing address):

C.J. van Houtenlaan 36
1381 CP Weesp
The Netherlands

3 General description of the types of diseases covered:

No production of vaccins in 1999

Declaration of vaccine production facilities

1 Name of facility:

Intervet International B.V.

2 Location (mailing address):

P.O. Box 20
5830 AA Boxmeer
The Netherlands

3 General description of the types of diseases covered:

Common animal pathogens incl. bacterial and protozoal

Declaration of vaccine production facilities

1 Name of facility

National Institute of Public Health and the Environment (RIVM);
Foundation for the Advancement of Public Health and Environmental Protection (SVM)

2 Location (mailing address)

Antonie van Leeuwenhoeklaan 9
3721 MA Bilthoven
The Netherlands
Internet address: http://www.rivm.nl

3 General description of the types of diseases covered

Bladder carninoma;
Diphtheria;
Measles;
Mumps;
Pertussis;
Poliomyelitis;
Rubella;
Tetanus;
Tuberculosis.

Form A, part 2 (iii)

National biological defence research and development programme

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii)

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

TNO Prins Maurits Laboratory
Division Toxic Substances

2. Where is it located (include both address and geographical location)?

Lange Kleiweg 137
P.O. Box 45
2280 AA Rijswijk
The Netherlands
(5 km south of The Hague)

3. Floor area of laboratory areas by containment level:

Normal laboratory facilities	*approx. 2500 sqM*
CW-agent containment facilities	*approx. 1000 sqM*
BL-2 facility	*approx. 100 sqM*
Total laboratory floor area	*approx. 3600 sqM*

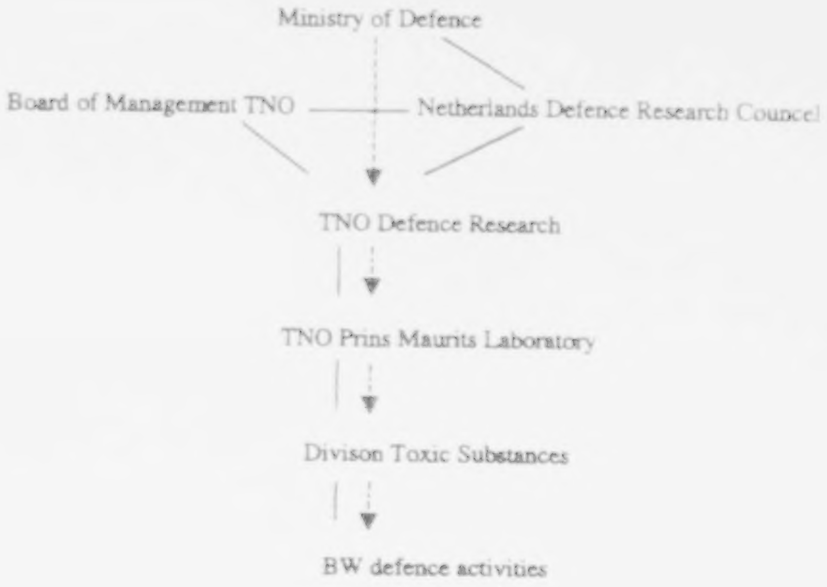
4. The organizational structure of each facility

(i) Total number of personnel *9*

(ii) Division of personnel

Military	*0*
Civilian	*9*

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).


Ministry of Defence
Board of Management TNO
Netherlands Defence Research Councel
TNO Defence Research
TNO Prins Maurits Laboratory
Divison Toxic Substances
BW defence activities

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See form A, part 2 (iii)

National biological defence research and development programme

B *TNO Prevention and Health*
Division of Immunological and Infectious Diseases

1 State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

- *Development of rapid detection and identification methods for biological agents based on DNA methods and antibody recognition*
- *Development of an oral vaccine against inhalation anthrax*
- *Development of passive immunization methods*

2 State the total funding for the programme and its source.

Ministry of Defence, 1.25 M Dutch Guilders

3 Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

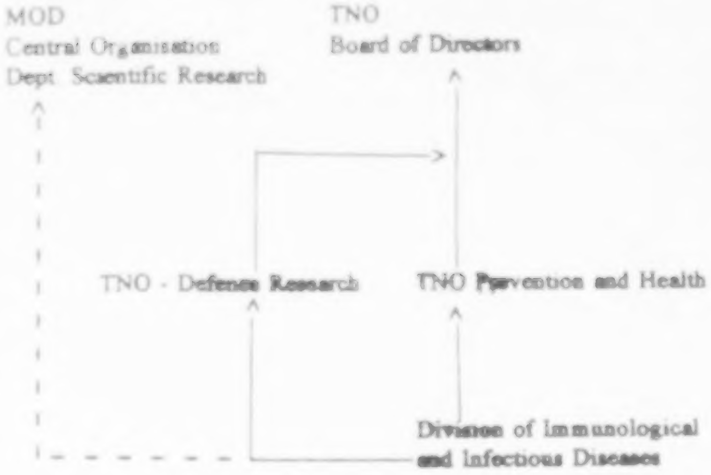
4 If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

N.A.

5 Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

N.A.

6 Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).


MOD
Central Organisation
Dept. Scientific Research
TNO
Board of Directors
TNO - Defence Research
TNO Prevention and Health
Division of Immunological
and Infectious Diseases

7 Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See form A, part 2 (iii)

NEW ZEALAND

15 May 2000

Please find enclosed the New Zealand annual declaration in respect of confidence building measures agreed for the Biological Weapons Convention for the 1999 calendar year

New Zealand - Statement of Compliance with the Biological Weapons Convention

Article I

New Zealand has never developed, produced, stockpiled or otherwise acquired or retained biological agents or toxins in quantities that have no justification for defence, or the weapons, equipment or means of delivery designed to use such agents or toxin for hostile purposes in armed conflict.

Article II

Article II does not apply to New Zealand (see note under article I).

Article III

New Zealand is in full compliance with Article III.

New Zealand implements controls on the transfer of goods which could be used for the development or production of biological weapons. All cases are treated on a case-by-case basis under regulations implemented by the Ministry of Foreign Affairs and Trade. Transfers for peaceful purposes are unaffected.

The New Zealand Government has alerted Government and private research laboratories to the possibility that they may receive requests from other countries for information or equipment that could be used for the production of biological weapons, and advised them of the likely characteristics of a suspicious request.

In addition, the New Zealand Government recently undertook consultations with Government and private research laboratories to gather information for the purposes of its Confidence Building Measures Declaration to the Biological Weapons Convention.

Only a few facilities in New Zealand deal with listed human, animal, or plant pathogens.

Article IV

The New Zealand Nuclear Free Zone, Disarmament and Arms Control Act 1987 implements the Convention in New Zealand, and specifically prohibits the manufacture, stationing, acquisition, possession or control of any biological weapon in New Zealand.

Article V

To date, New Zealand has not invoked the provisions of article V, nor have the provisions of article V been invoked with respect to New Zealand. New Zealand has participated fully in the confidence building measures established following the Second Review Conference, and has made declarations under the scientific and technological data exchange every year since that time, declaring New Zealand conducts no research related to any aspect of biological warfare, including research for protective or defensive purposes, that there have been no outbreaks of infectious diseases and similar occurrences caused by toxins, and that we have encouraged the publication of results and promotion of knowledge and contacts.

Articles VI and VII

New Zealand has not invoked the provisions of articles VI and VII, nor have the provisions of these articles been invoked against New Zealand.

Articles VIII and IX

New Zealand has signed the Chemical Weapons Convention which Entered into Force on 29 April 1997, and has submitted full initial and subsequent annual national declarations to the Organisation for the Prohibition of Chemical Weapons. New Zealand supports the addition of verification measures to the Biological Weapons Convention.

Article X

The ability of New Zealand research and health workers to communicate with and exchange materials with colleagues overseas in not inhibited and is encouraged. New Zealand contributes biotechnology, training, and scholarship assistance as part of its overseas development assistance for developing countries. Cooperation for peaceful purposes in New Zealand takes place with Government research institutions, semi-Government institutions, universities, and the private sector, primarily in the fields of medicine and public health, animal research, and food technology. Results of all research are published in international and national scientific journals, and at local and international conferences. Reference laboratory services are available to researchers and health workers in other countries, and materials are regularly exchanged with other countries, particularly in the South Pacific.

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE

Measure	Nothing to Declare	Nothing New to Declare
A Part 1	☒	☐
A Part 2 (i)	☒	☐
A Part 2 (ii)	☒	☐
A Part 3 (iii)	☒	☐
B (i)	☒	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☐	☒
F	☒	☐
G	☒	☐

(Please mark the appropriate box(es) for each measure with a tick)

Date: April 2000

State Party to the Convention: New Zealand

SECTION B(i): no unusual outbreaks to declare. See attached information.

Form B (i)

Disease	1995	1996	1997	1998	1999
Acute gastroenteritis	**	435	309	489	607
AIDS	50	76	45	29	34
Brucellosis	***	1	**	1	1
Campylobacter	7514	7628	8925	11578	8161
Cholera	2	**	**	1	1
Congenital Rubella	1	**	**	**	**
Creutzfeld Jakob disease	**	2	1	**	**
Cryptospondiosis	**	110	357	866	976
Dengue Fever	7	23	14	26	9
Diptheria	**	**	**	1	**
E. Coli 0157	**	8	**	**	**
Food poisoning	518	67	**	**	**
Giardiasis	**	898	2129	2186	1794
Haemophilus influenzae type b	16	28	14	11	10
Hepatitis A	44	305	346	146	119
Hepatitis B (acute cases)	107	103	138	89	93
Hepatitis C (acute cases)	62	59	92	102	95
Hydatid disease	**	3	2	2	8
Legionellosis*	70	37	62	43	51
Leprosy	1	10	2	2	10
Leptospirosis	65	26	**	75	55
Listeriosis	15	10	35	17	19
Malaria	42	107	65	73	46
Measles*	**	54	2140	1640	106
Meningococcal disease	394	473	617	440	507
Mumps	**	63	89	85	56
Paratyphoid	11	19	25	16	12
Pertussis	**	594	284	153	1045
Poliomyelitis (vaccine related)	**	**	**	1	1
Psittacosis	2	**	**	**	**

Disease	**1995**	**1996**	**1997**	**1998**	**1999**
Puerpal infection	86	10	**	**	**
Rheumatic fever	92	107	92	64	63
Ross river virus infection	**	**	**	1	1
Rubella*	**	259	81	53	37
Salmonellosis	1352	1140	1175	2069	2082
Shigellosis	191	168	114	122	147
Taeniasis	**	**	**	1	2
Tetanus	**	3	**	1	6
Tuberculosis	296	258	329	368	450
Typhoid	21	15	16	31	9
VTEC infection	**	**	**	1	63
Yersiniosis	**	247	488	547	503

* Laboratory reported cases only

** Statistics not available/recorded

Animal Diseases

Disease	1995	1996	1997	1998	1999
Anthrax	0	0	0	0	0
Psittacosis	3	low sporadic occurrence	low sporadic occurrence	low sporadic occurrence	low sporadic occurrence
Enzootic bovine leukosis	1	0	7	10	18
Tuberculosis (cattle, farmed deer)	4647	6042	4168	2808	1421
Tuberculosis (pig, goat, cat, ferret)	**	**	**	**	116
Echinococcus (cattle, sheep)	**	**	**	0	1
Leptospirosis	**	**	**	**	**
Aujeszky's disease	4 outbreaks all stamped out	0	0	0	***
Equine viral arteritis	0	0	0	0	0
Scrapie[1]	0	0	0	0	0
Bovine spongiform encephalopathy[2]	0	0	0	0	0

** Statistics not available/recorded

*** Disease eradicated in New Zealand

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[1] last occurred in 1954

[2] never recorded

NORWAY

17 April 2000

Biological Weapons Convention: Declaration on Confidence-building Measures

Please find enclosed the annual declaration of Norway

Annex to Final Declaration on Confidence-building measures

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A. Part 1	☐	☒
A. Part 2 (i)	☐	☒
A. Part 2 (ii)	☐	☒
A. Part 2 (iii)	☐	☒
B (i)	☒	☐
B (ii)	☒	☐
C	☐	☒
D	☐	☒
E	☐	☒
F	☐	☒
G	☐	☐

(Please mark the appropriate box(es) for each measure with a tick.)

Date 10 April 2000

State Party to the Convention: Norway

2 CONFIDENCE-BUILDING MEASURE «A»

Part 1. Exchange of data on research centres and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following:

«Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual or community risk or specialize in permitted biological activities directly related to the Convention.»

Modalities

The Third Review Conference agreed that data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the 1983 WHO Laboratory Biosafety Manual such as those designated as biosafety level 4 (BL4) or P4 or equivalent standards.

Form A part 1

Exchange of data on research centres and laboratories 1/

1 Name(s) of facility 2/

Institute of Microbiology
Armed Forces Medical Services

2 Responsible public or private organization or company

Department of Defence

3 Location and postal address

Geitmyrsveien 75, Oslo. This location is within the confinement of the National Institute of Public Health.
Postal address:P.O. Box 4302 Torshov, N-0401 Oslo, Norway

4 Source(s) of financing of the reported activity, including indication of the activity is wholly or partially financed by the Ministry of Defence

Fully financed by the Ministry of Defence

5 Number of maximum containment units within the research centre and/or the laboratory, with an indication of their respective size (m^2) 3/

No BL-4   One BL-3 unit 175m^2

6 If no maximum containment unit, indicate highest level of protection

BL-3

7 Scope and general description of activities including type(s) micro-organisms and/or toxins as appropriate

Bacterial groups
francisellas, yersinias, bacilli, chlamydias.

Toxins from
staphylococci, shigellas, clostridias, yersinas, bacilli.

Activities
- Epidemiology studies
- Diagnostics and detection within the upkeeping of routine techniques

1) The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately

2) For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark «Declared in accordance with Form A, Part 2 (iii)»

3) In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Part 2. Exchange of information on national biological defence research and development programmes

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programmes on biological defence, the States Parties will declare whether or not they conduct such programmes. State Parties agree to provide, annually, detailed information on their biological defence research and development programmes, including summaries of the objectives and costs of effort performed by contractors and in other facilities. If no biological defence research and development programme is being conducted, a null report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

(1) The objective and summary of the research and development activities under way indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;

(2) whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the programme;

(3) the organizational structure of that programme and its reporting relationships; and

(4) the following information concerning the defence and other governmental facilities in which the biological defence research and development programme is concentrated:

(a) location;

(b) the floor area (m²) of the facilities including that dedicated to each of BL2, BL3 and BL4 level laboratories;

(c) the total number of staff employed, including those contracted full time for more than six months;

(d) numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;

(e) a list of scientific disciplines of the scientific/engineering staff;

(f) the source and funding levels in the following three areas: research, development, and test and evaluation; and

(g) the policy regarding publication and a list of publicly available papers and reports.

Form A, part 2

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include propylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

[✓ Yes] / No

If the answer is Yes, complete form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)

National biological defence research and development programme

Description

1. State the objective and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

Are aspects of this programme conducted under contact with industry, academic institutions, or in other non-defence facilities?

Yes [✓ No]

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (iii)

National biological defence research and development programme

Facilities

Compete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

Institute of Microbiology, Armed Forced Medical Services, Oslo,Norway.

2. Where is it located (include both address and geographical location)?

P.O.Box 4302 Torshov, N-401 Oslo

Location: Geitmyrsveien 75, Oslo

3. Floor area of laboratory areas by containment level:

BL2 175 sqm
BL3 175 sqm
BL4 sqm
Total laboratory floor area 350 sqm

4. The organizational structure of each facility.

(i)	Total number of Personnel	10
(ii)	Division of personnel:	
	Military	5
	Civilian	5
(iii)	Division of personnel by category:	
	Scientists	2
	Engineers	4
	Technicians	3
	Administrative and support staff	1

(iv) List the scientific disciplines represented in the scientific / engineering staff

Human and veterinariar microbiology

(v) Are contractor staff working in the facility? If so, provide an approximate number

No

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partially financed by the Ministry of Defence?

Wholly by the Ministry of Defence

(vii) What are the funding levels for the following programme areas

Research	US $ 100.000
Development	US $ 100.000
Test and evaluation	US $ 100.000

(viii) Briefly describe the publication policy of the facility

International scientific reviews

(ix) Provide a list of publicly available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

5. Briefly describe the biological defence work carried out in the facility, including type(s) of micro-organisms[**] and/or toxins studied, as well as outdoor studies of biological aerosols.

Diagnostic of infection due to chlamydias, franciscellas, hantaviruses.

Diagnostic of bacterial toxins from staphylococci, shigellas, clostridias, yersinias, bacilli.

[**] Including viruses and prions

V. CONFIDENCE BUILDING MEASURE «B»

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins

At The Third Review Conference it was agreed that States Parties continue to implement the following:

Exchange of information on outbreak of infectious diseases and similar occurrences caused by toxins, and all such events that seem to deviate from the normal pattern as regards type, development, place or time of occurrence. The information provided on events that deviate from the norm will include, as soon as it is available, data on the type of disease, approximate area affected, and number of cases.

Modalities

The Third Review Conference agreed the following definition:

An outbreak or epidemic is the occurrence of an unusually large or unexpected number of cases of an illness or health related event in a given place at a given time. The number of cases considered as unusual will vary according to the illness or event and the community concerned.

Furthermore, reference was made to the following definitions:

An epidemic of infectious disease is defined as an unusually large or unexpected number of cases of a disease known or suspected to be of infectious origin, for a given place and time. It is usually a rapid evolving situation, requiring a rapid response. (WHO internal document CDS/Mtg/82.1).

The occurrence in a community or region of cases of an illness, specific health related behaviour, or other health related events clearly in excess of normal expectancy. The number of cases indicating the presence of an epidemic will vary according to the agent, size and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence; epidemicity is thus relative to usual frequency of the disease in the same area, among the specified population, at the same season of year. A single case of communicable disease long absent from a population or first invasion by a disease not previously recognized in that area requires immediate reporting and full field investigation; two cases of such a disease associated in time and place may be sufficient evidence to be considered an epidemic. (J.M. Last, A dictionary of Epidemiology, Oxford University Press, New York, Oxford, Toronto, 1983.)

The Third Review Conference agreed on the following:

1. In determining what constitutes an outbreak States Parties are recommended to take guidance from the above.

2 Since no universal standards exists for what might constitute a deviation from the normal pattern, States Parties agreed to utilize fully existing national reporting systems on human diseases as well as animal and plant diseases, where possible, and systems within WHO to provide annual update on background information on diseases caused by organisms which meet the criteria for risk groups II, III and IV according to the classification in the 1983 WHO Laboratory Safety Manual, the occurrence of which, in their respective areas, does not necessarily constitute a deviation from normal patterns.*

3 Exchange of data on outbreaks that seem to deviate from the normal pattern is considered particularly important in the following cases:

when the cause of the outbreak cannot be readily determined or the causative agent** is difficult to diagnose,

when the disease may be caused by organisms which meet the criteria for risk groups III or IV, according to the classification in the 1983 WHO Laboratory Biosafety Manual,

when the causative agent is exotic to the given region,

when the disease follows an unusual pattern of development,

when the disease occurs in the vicinity of research centres and laboratories subject to exchange of data under item A,

when suspicions arise of the possible occurrence of a new disease.

4 In order to enhance confidence, an initial report of an outbreak of an infectious disease, or a similar occurrence that deviates from the normal pattern should be given promptly after cognizance of the outbreak and should be followed up by annual reports.

To enable States Parties to follow a standardized procedure, the Conference has agreed that form B (ii) should be used, to the extent information is known and/or applicable, for the exchange of initial as well as annual information.

5 In order to improve international cooperation in the field of peaceful bacteriological (biological) activities and in order to prevent or reduce the occurrence of ambiguities, doubts and suspicion, States Parties are encouraged to invite experts from other States Parties to assist in the handling of a outbreak, and to respond favourably to such invitations.

* This information should be provided in accordance with form B (i).

** It is understood that this may include organisms made pathogenic by molecular biology techniques, such as genetic engineering.

Form B (i)

Background information on outbreak of reportable infectious diseases

Diseases	Number of cases per year				
	1996	1997	1998	1999	2000

Norway: There have been no unusual outbreaks for any of these years, including human, animal and plant disease.

B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1. Time of cognizance of the outbreak
2. Location and approximate areas affected
3. Type of disease/intoxication
4. Suspected source of disease/intoxication
5. Possible causative agent(s)
6. Main characteristics of system
7. Detailed symptoms, when applicable Nothing to declare from Norway
    - respiratory
    - circulatory
    - neurological/behavioural
    - intestinal
    - dermatological
    - nephrological
8. Deviation(s) from the normal pattern as regards
    - type
    - development
    - place of occurrence
    - time of occurrence
    - symptoms
    - virulence pattern
    - drug resistance pattern
    - agent(s) difficult to diagnose
    - presence of unusual vectors
    - other

9 Approximate number of primary cases

10 Approximate number of total cases

11 Number of deaths

12 Development of the outbreak

13 Measures taken

4 CONFIDENCE BUILDING MEASURE «C»

Encouragement of publication of results and promotion of use of knowledge

At the Third Conference it was agreed that States Parties continue to implement the following

«Encouragement of publication of results of biological research directly related to the Convention, in scientific journals generally available to States parties, as well as promotion of use for permitted purposes of knowledge gained in this research »

Modalities

The Third Review Conference agreed on the following

1. It is recommended that basic research in biosciences, and particularly that directly related to the Convention should generally be unclassified and that applied research to the extent possible, without infringing on national and commercial interests, should also be unclassified

2. States parties are encouraged to provide information on their policy as regards publication of results of biological research, indicating , inter alia, their policies as regards publication of results of research carried out in research centres and laboratories subject to exchange of information under item A and publication of research on outbreaks of diseases covered by item B, and to provide information on relevant scientific journals and other relevant scientific publications generally available to States parties.

3. The Third Review Conference discussed the question of cooperation and assistance as regards the safe handling of biological material covered by the Convention. It concluded that other international forums were engaged in this field and expressed its support for efforts aimed at enhancing such cooperation

5 CONFIDENCE BUILDING MEASURE «D»

Active promotion of contacts

At the Third Review Conference it was agreed that States parties continue to implement the following

«Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis »

Modalities

The Third review Conference agreed on the following

In order to actively promote professional contact between scientists, joint research projects and other activities aimed at preventing or reducing the occurrence of ambiguities, doubts and suspicions and at improving international cooperation in the field of peaceful bacteriological (biological) activities, States parties are encouraged to provide information to the extent possible

- on planned international conferences, seminars, symposia and similar events dealing with biological research directly related to the Convention,
- on other opportunities for exchange of scientists, joint research or other measures to promote contacts between scientists engaged in biological research directly related to the Convention

To enable States parties to follow s stadardized procedure, the Third Review Conference has agreed that Form D should be used for exchange of information under this item

FORM D

Active promotion of contacts

1 Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc	
- arranging organization(s), etc	
- time	
- place	Norway
- main subject(s) for the conference, etc	None planned
- conditions for participation	
- point of contact for further information, registration etc	

2 Information regarding other opportunities

6. CONFIDENCE-BUILDING MEASURE «E»

Declaration of legislation, regulations and other measures

At the Third Review Conference the States parties agreed to implement the following:

As an indication of the measures which they have taken to implement the Convention, States parties shall declare whether they have legislation, regulations or other measures:

(a) to prohibit the development, production, stockpiling, acquisition, or retention of microbiological or other biological agents, or toxins, weapons, equipment or means of delivery, specified in article I of the Convention, within their territory or anywhere under their jurisdiction of control;

(b)in relation to the export or import of micro-organisms pathogenic to man, animals and plants or of toxins in accordance with the Convention;

States parties shall complete the attached form (Form E) and shall be prepared to submit copies of the legislation or regulations, or written details of other measures on request to the United Nations Department for Disarmament Affairs or to an individual State party. On an annual basis States parties shall indicate, also on the attached form, whether or not there has been any amendment to their legislation, regulations or other measures.

Form E

Declaration of legislation, regulations and other measures

	Relating to	Legislation	Regulations	Other measures	Amended since last year
(a)	Development, production, stockpiling, acquisition or retention of microbiological or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	[✓ Yes]/No	[✓ Yes]/No	Yes/[✓ No]	Yes/[✓ No]
(b)	Exports of micro-organisms * and toxins	[✓ Yes]/No	[✓ Yes]/No	Yes/[✓ No]	Yes/[✓ No]
(c)	Imports of micro-organisms* and toxins	[✓ Yes]/No	[✓ Yes]/No	Yes/[✓ No]	Yes/[✓ No]

* Micro-organisms pathogenic to man, animal and plants in accordance with the Convention

7 CONFIDENCE-BUILDING MEASURE «F»

Declaration of past activities in offensive and/or defensive biological research and development programmes

In the interest of increasing transparency and openness, States parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programmes since 1 January 1946.

If so, States parties shall provide information on such programmes, in accordance with Form F.

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party

2. Past offensive biological research and development programmes:

   Yes/[✓ No]

   Period(s) of activities

   Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons and other related research

3. Past defensive biological research and development programmes:

   Yes/[✓ No]

   Period(s) of activities

   Summary of the research and development activities indicating whether or not work was conducted in the following areas:
   prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible

re 3 There has been work done related to human or animal disease as such, but nothing bearing on what is understood as a biological programme related to defence activities. All BTWC-related work that has been performed in Norway by military, public health, university, or other official facilities, has been published in open international scientific papers.

8 CONFIDENCE BUILDING MEASURE «G»

- Declaration of vaccine production facilities

To further increase the transparency of biological research and development related to the Convention and to the broaden scientific and technical knowledge as agreed in Article X, each State party will declare all facilities, both governmental and non-governmental, within its territory or under its jurisdiction or control anywhere, producing vaccines licensed by the State party for the protection of humans. Information shall be provided on Form G attached

`See form «G»`

Form G

Declaration of vaccine production facilities

1. Name of facility:
2. Location (mailing address):
3. General description of the types of diseases covered:

Alpharma
located at N-7863 Overhalla. Produces vaccine against Trichophyton fungal cattle infection.
Also produces antigens for fish vaccine purposes.

The Norwegian Veterinary Institute
Ullevålsveien 68,
N-0454 Oslo
produces small scale autogenous vaccines against Mycobacterium paratuberculosis infections in the goat, and various anti-staphylococcal vaccines for animal use. There is no production unit properly speaking.

During 1999, upstart of production of Mycobacterium tuberculosis tuberculin, and other mycobacterial sensitines, for human and veterinary diagnostics use.

The Norwegian National Institute of Public Health,
Postboks 4404 Torshov
N-0403 Oslo
has now ready vaccine production facilities. Possible future areas of production is influenza vaccine, and vaccine against Neisseria meningitidis group B infection.

Publication List (ix)

JL Davis, JA Heginbottom, A Peter Annan, RS Daniels, BP Berdal,
T Bergan, KE Duncan et al.:
Ground Penetrating Radar Surveys to Locate 1918 Spanish Flu
Victims in Permafrost.
ASTM Journal of Forensic Sciences, Jan. 2000.

REPUBLIC OF KOREA

27 April 2000

The Permanent Mission of the Republic of Korea to the United Nations presents its compliments to the Secretariat of the United Nations and, in accordance with the Final Declaration of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and their Destruction, has the honour to submit herewith the information on confidence building measures agreed to in the said Declaration for the year 2000.

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A. part 1	☐	☐
A. part 2(i)	☒	☐
A. part 2(ii)	☒	☐
A. part 2(iii)	☒	☐
B. (i)	☐	☐
B. (ii)	☒	☐
C	☐	☒
D	☒	☐
E	☐	☒
F	☒	☐
G	☐	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date April 14 2000

State Party to the Convention The Republic of Korea

Form A, part 1

Exchange of data on research centers and laboratories[1]

1 Name(s) of facility[1]

Korea Research Institute of Bioscience and Biotechnology

2 Responsible public or private organization or company

Korea Institute of Science and Technology

3 Location and postal address

P.O.BOX 115, Taedok Science Town, Taejon, Korea

4 Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Financial support by Office for Government Policy Coordination
No financial support by Ministry of Defence

5 Number of maximum containment units[2] within the research center and / or laboratory, with an indication of their respective size (m²)

Zero

6 If no maximum containment unit, indicate highest level of protection

BL3 (85.8 m²)

7 Scope and general description of activities, including type(s) of micro- organisms and/or toxins as appropriate

Biomedical and Agrochemical research for development of useful therapeutic protein and microbial metabolites
No research activity with toxins

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[1] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2] For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Exchange of data on research centers and laboratories①

1. Name(s) of facility[3]

   High security laboratory for the research on exotic animal diseases in Foreign Animal Disease Research Division, National Veterinary Research and Quarantine Service

2. Responsible public or private organization or company

   Ministry of Agriculture and Forestry

3. Location and postal address

   Anyang 6dong, Mana-gu 480, kyongido, 430-016 Republic of Korea

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   No financial support by the Ministry of Defence

5. Number of maximum containment units[2] within the research center and / or laboratory, with an indication of their respective size (m^2)

   Zero

6. If no maximum containment unit, indicate highest level of protection (m^2)

   BL3 (122.4m^2)

7. Scope and general description of activities, including type(s) of micro- organisms and/or toxins as appropriate

   Serological diagnosis on foot and mouth disease virus using commercially available ELISA kit from Pirbright in England

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[1] The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2] For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"

[3] In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A, part 2(i)

National Biological Defence Research and Development Program Declaration

1) Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research

Yes / [✓ No]

If the answer to (1) is Yes, complete Form A part 2 (ii) which will provide a description of the program

Form B(i)

Background information on outbreaks of reportable infectious diseases

Number of cases per year

Disease	1993	1994	1995	1996	1997	1998	1999
Cholera	0	0	68	2	10	0	0
Typhoid fever	0	267	370	475	265	380	308
Paratyphoid	0	8	30	9	9	12	11
Bacillarry dysentery	0	233	23	9	11	905	1,781
Pertusis	0	0	3	7	13	9	2
Measles	160	7,883	271	65	2	4	88
Mumphs	404	1,874	430	254	4,461	4,461	2,626
Japanese encephalitis	4	3	0	0	0	3	1
Malaria	3	25	107	356	1,724	3,932	3,636
Murin typnoid			14	3	11	28	33
Scarlet fever	76	153	141	132	116	115	109
Amebic dysentery	0	0	3	3	20	18	9
Memingococcal meningitis	7	5	4	3	2	13	3
HFRS	109	132	89	118	104	215	195
Leptospirosis	0	7	13	6	4	90	130
Scrub typhoid	0	153	274	263	227	1,140	1,342
Rabies	0	0	0	0	0	0	1

Form B(ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

1	Time of cognizance of the outbreak	Null
2	Location and approximate area affected	Null
3	Type of disease/intoxication	Null
4	Suspected source of disease/intoxication	Null
5	Possible causative agent(s)	Null
6	Main characteristics of systems	Null
7	Detailed symptoms when applicable - respiratory - circulatory - neurological/behavioural - intestinal - dermatological - nephrological - other	Null
8	Deviation(s) from the normal pattern as regards - type - development - place of occurrence - time of occurrence - symptoms - virulence pattern - drug resistance pattern - agent(s) difficult to diagnose - presence of unusual vectors - other	Null
9	Approximate number of primary cases	Null
10	Approximate number of total cases	Null
11	Number of deaths	Null
12	Development of the outbreak	Null
13	Measures taken	Null

Form C

Encouragement of publication of results and promotion of use of knowledge

1 Activities

No research on BWC-related microbial toxins has been conducted in Korea. Vaccine development against diseases caused by pathogenic microorganisms, defined by the Korean Government as 1st and 2nd class communicable diseases, is currently being conducted by a number of pharmaceutical companies. The resulting products will be controlled and subject to inspection by the Republic of Korea National Institute of Health.

Information on pathogenic microorganisms and Korean research and development methodology is well-known and widely publicized in both leading domestic and international scientific journals.

Form D

Active promotion of contacts

1 Planned international conferences, symposia, seminars, and other similar fora for exchange

For each such event, the following information should be provided :

- name of the conference, etc	Null
- arranging organization(s), etc	Null
- time	Null
- place	Null
- main subjects(s) for the conference, etc	Null
- conditions for participation	Null
- point of contact for further information, registration, etc	Null

2 Information regarding other opportunities Null

Form E

Declaration of Legislation, Regulations and Other Measures

RELATING TO	LEGISLATION	REGULATIONS	OTHER MEASUERS	AMENDED SINCE LAST YEAR
a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES / [✓ NO]	YES / [✓ NO]	YES / [✓ NO]	YES / [✓ NO]
b) Exports of micro-organisms* and toxins	YES / [✓ NO]	[✓ YES] / NO	YES / [✓ NO]	YES / [✓ NO]
c) Imports of micro-organisms* and toxins	YES / [✓ NO]	YES / [✓ NO]	YES / [✓ NO]	YES / [✓ NO]

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* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

Form F

Declaration of past activities in offensive and/or defensive biological research and development program

1 Date of entry into force of the Convention for the State Party

June 25, 1987

2 Past offensive biological R and D programs

- YES - NO
- Period(s) of activities Null
- Summary of the R and D activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction program of such agents and weapons, and other related research Null

3 Past defensive biological R and D programs

- YES - [✓ NO]
- Period(s) of activities Null
- Summary of the R and D activities indicating whether or not work was conducted in the following areas prophylaxis, studies on pathogenecity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible Null

Form G

Declaration of vaccine production facilities

Names of facility	Location (mailing address)	General description of the types of diseases covered
Boryung Biopharma Co., LTD	250-3, Chokhyun-ri, Manseung-myon, Jinchon-kun, Chungbuk, 365-830, Korea	- Japanese Encephalitis - Typhoid fever - Hepatitis B - Influenza - Leptospira - Pertussis, diphtheria, tetanus - Cholera - Measles, mumps, rubella - Polio - Varicella
Ichon II Pharmaceutical Plant /CHEILJEDANG Corporation	511, Dokpyong-ri, Majang-myon, Ichon-city, Kyunggi-do 467-810, Korea	- Hepatitis B - Varicella zoster virus vaccine - Streptococcus pneumoniae vaccine
Biological Product Section / Dong-A Pharm. Co., LTD	29-40, Bonri-ri, Nongong-eup, Talsung-kun, Taegu 711-855, Korea	- JEV(Japanese encephalitis virus)
Product Dept. / Dong Shin Pharm. Co., LTD	12, Kohyun-dong, Osan-city, Kyunggi-do 447-320, Korea	- DPT3(Diphtheria, tetanus, pertussis) - Japanese encephalitis virus
Iksan Plant / LG Chemical LTD	599, Yongjei-dong, Iksan-city, Chunbuk 570-350, Korea	- Hepatitis B - Chicken pox

Names of facility	Location (mailing address)	General description of the types of diseases covered
Product Dept / Korea Green Cross Corporation	227-3, Gugal-ri, Yongin-city, Kyunggi-do 449-900, Korea	- DPT3(Diphtheria, Tetanus, Pertussis) - Japanese encephalitis vaccine - Hepatitis B virus - Leptospira B vaccine - Haemorrage fever renal syndrome vaccine - Varicella zoster vaccine live - Rubella vaccine - Poliomyelitis vaccine - Measles vaccine - Measles, Mumps, Rubella virus - Adsorbed diphtheria purified pertussis tetanus - Purified IV Typhoid vaccine - Hantaan virus
Product Dept / Korea Vaccine Co., LTD	3BL-6, Banwolgongdan, 394, Moknae-dong, Ansan-city, Kyunggi-do 425-100, Korea	- Measles - Rubella - Influenza HA - Purified DPT - Japanese encephalitis - Typhoid - Freeze dried agkistrodon halys antivenom - Polio S - Freeze dried glutamate BCG - Varicella

ROMANIA

3 May 2000

The Permanent Mission of Romania to the United Nations presents its compliments to the Secretariat of the Organization, Department for Disarmament Affairs - Weapons and Mass Destruction Branch and has the honour to present herewith, attached, the 1999 Report of Romania regarding the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, made in accordance with the provisions of the Final Declaration of the Third Review Conference of the Parties.

1999 REPORT

in accordance with the
Final Declaration of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction

April 15, 2000

Declaration Form
on Nothing to Declare or Nothing New to Declare
for use in the information exchange

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE
A, part 1		X
A, part 2 (i)	X	
A, part 2 (ii)	X	
A, part 2 (iii)	X	
B (i)		
B (ii)		X
C		X
D		
E		X
F	X	
G		X

Date: **April 15, 2000**

State Party to the Convention: **ROMANIA**

ROMANIA Form A, part 1

Exchange of Data on Research Centers and Laboratories

1. Name(s) of the research center and/or laboratory	**Army Center of Medical Research** * Antiinfection protection laboratory * Epidemiological emergencies team
2. Responsible public or private organization or company	**Ministry of National Defense**
3. Location and postal address	**37 C.A.Rosetti Street,** **P.O.Box 1-160, Bucharest 1,** **Romania**
4. Source(s) of financing	**Ministry of National Defense**
5. Number of maximum containment units (m^2)[1]	**No P_4 or P_3 units**
6. Highest level of protection	**P_2 – about 520 m^2**
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate	**The laboratory undertakes research and diagnosis of infectious diseases in human beings, develops methods for prophilaxy and treatment against diseases caused by pathogenic agents (cholerae, arboviruses, Rickettsiae, Salmonella, Staphylococcic); products for supervising the prohibition, non-proliferation and destruction of biological weapons; intervention into unusual outbreaks.**

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[1] In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

Exchange of Data on Research Centers and Laboratories

1. Name(s) of the research center and/or laboratory	**"Cantacuzino" Institute**
2. Responsible public or private organization or company	**Ministry of Health**
3. Location and postal address	**103 Splaiul Independentei, Bucharest, Romania**
4. Source(s) of financing	**Self-sustained (non-profit institution) No financing from the Ministry of National Defense**
5. Number of maximum containment units (m^2)[*]	**P$_3$ protection unit: 16 m^2\\ 1 laboratory vaccine production unit**
6. Highest level of protection	**NA**
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate	**1) Basic and applied research programs in bacteriology, virology and parasitology. 2) Research in epidemiological programs, studies and surveys. 3) Applied research programs for vaccine and sera production development. 4) Applied research on diagnostic methods and methodologies in microbial diseases.**

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[*] In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

5) Production of vaccines (bacterial and viral), sera (for treatment and diagnostic purposes), immunomodulators, allergens and reagents for microbiological diagnostics.

6) Training in microbiology and immunology.

Exchange of Data on Research Centers and Laboratories

1. Name(s) of the research center and/or laboratory	**"St. Nicolau" Institute of Virology**
2. Responsible public or private organization or company	**Public Institution**
3. Location and postal address	**283-285 Mihai Bravu Street,** **Bucharest, Romania**
4. Source(s) of financing	**Budget**
5. Number of maximum containment units (m^2)[*]	**No P_4 or P_3 units**
6. Highest level of protection	**P_2 is the highest level of protection**
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate	**Basic and applied virological research and diagnosis of viral infections in man**

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[*] In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

Exchange of Data on Research Centers and Laboratories

1. Name(s) of the research center and/or laboratory	**Institute of Hygiene and Public Health**
2. Responsible public or private organization or company	**Ministry of Health**
3. Location and postal address	**1-3 Dr.Leonte Street, Bucharest, Romania**
4. Source(s) of financing	**Ministry of Health No financing by the Ministry of National Defense**
5. Number of maximum containment units (m^2)[*]	**No P_4 or P_3 units**
6. Highest level of protection	**P_3 is the highest level of protection**
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate	**1) Food and environmental microbiological control. 2) Laboratory diagnosis in food borne diseases. 3) Training in the above mentioned fields**

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[*] In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

ROMANIA **Form B (i)**

Background Information on Morbidity of Reportable Infectious Diseases in 1999

HUMAN DISEASES

DISEASE	MORBIDITY
Botulism	0.08
Chickenpox	169.65
Dysentery	15.34
Erysipelas	10.69
Food Borne diseases	11.56
Influenza	457.77
Leptospiroses	3.36
Measles	1.07
Meningitis	1.76
Mumps	228.80
Rubella	31.51
Salmonellosis	4.91
Scarlet fever	13.78
Streptococcal angina	66.89
Tetanus	0.08
Typhoid fever	0.03
Trichinelliasis	6.74
Viral hepatitis	99.68

Background Information on Morbidity of Reportable Infectious Diseases in 1999

ANIMAL DISEASES

DISEASE	OUTBREAKS
Anthrax	14/30
Leptospiroses	14/109
Porcine brucellosis	8/22
Rabbies	40/42*

* 17/18 in wild animals

ROMANIA **Form C**

Encouragement of publication of scientific results and promotion of use of knowledge

1. The scientific results were published in Romanian and European publications. No restrictions are exerted in publishing research data.

2. Scientific publications can be obtained directly from the sources.

3. Romanian publications (printed in English) are available to the authors (Romanian or foreign) without financial contributions.

ROMANIA **Form D**

Active promotion of contacts

Part one

National and international publications in the microbiological field

1. **"Review of Military Medicine"**
Published quarterly by the Medical Service of the Army, Navy and Air Forces. 134 Calea Plevnei, R-77103, Bucharest, Romania.

2. **"Romanian Archives of Microbiology and Immunology"**
Published quarterly by "Cantacuzino" Institute (in English).
103 Splaiul Independentei, Bucharest, Romania.

3. **"Revue Roumaine de Virologie"**
Published quarterly by the Institute of Virology (in English and French). 285 Mihai Bravu Street, Bucharest, Romania.

4. **"Bacteriology, Virology, Parasitology, Epidemiology"**
Published quarterly by the Romanian Society for Microbiology,
10 Progresului Street, Bucharest, Romania.

5. **"Studies and Research in Veterinary Medicine"**
Published periodically by the "Pasteur" National Institute for Veterinary Medicine (in Romanian and English)
333 Calea Giulesti, Bucharest, Romania.

Part two

Conferences and other national scientific events with international participation

1. The First National Congress of Laboratory Medicine
"Harmonizing technologies and results in medical laboratories and providing the quality of the laboratory analyses"
Bucharest, 8 – 10 September 1999.

2. Romanian – French Workshop on "Antibiotic resistance in nosocomial infection"
Bucharest, 3 – 7 May 1999.

3. NATO Advanced Research Workshop "BTWC security implications of human, animal and plant epidemiology"
Bucharest, 2 – 5 June 1999.

4. Romanian – French Workshop on "Antibiotic resistance in France and Romania, a comparison"
Bucharest, 18 – 19 June 1999.

5. The Fifth National Congress on Microbiology
"Emergence of antibiotic resistance of microorganisms"
Bucharest, September 1999.

International courses organized at "Cantacuzino" Institute

"Update in clinical and laboratory diagnosis of infectious diseases" – organized by the Romanian-American Foundation of Medical Training, Bucharest, 28 June – 3 July 1999.

RUSSIAN FEDERATION

24 April 2000

Please find enclosed herewith a report entitled "Information on Facilities and Biological Activity of the Russian Federation Related to the Convention on Prohibition of Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and Their Destruction" for 1999, prepared by the Russian side pursuant to the decision of the 3rd Conference on examining of the operation of the Convention. This document is transmitted at the request of Mr. Y. Kapralov, Director of the Department of Security and Disarmament Affairs of the Russian Ministry of Foreign Affairs.

Г-ну Дж. ДХАНАПАЛЕ

Заместителю Генерального секретаря
Организации Объединенных Наций,
Руководителю Департамента по вопросам
разоружения Секретариата ООН

Уважаемый Господин Заместитель Генерального секретаря,

Направляем через Информационный центр ООН в Москве "Информацию об объектах и биологической деятельности Российской Федерации, связанных с Конвенцией о запрещении разработки, производства и накопления запасов бактериологического (биологического) и токсинного оружия и об их уничтожении" за 1999 год, подготовленную российской стороной в соответствии с решением III Конференции по рассмотрению действия Конвенции.

Приложение: упомянутое, на 44 лл.

Ю.КАПРАЛОВ

Директор Департамента по вопросам
безопасности и разоружения
Министерства иностранных дел
Российской Федерации

ИНФОРМАЦИЯ

об объектах и биологической деятельности Российской Федерации, связанных с Конвенцией о запрещении разработки, производства и накопления запасов бактериологического (биологического) и токсиного оружия и об уничтожении их запасов

I. Объявление по форме: "Объявлять нечего" или "Нет никаких новых изменений, подлежащих объявлению" для использования при обмене информацией

Мера	Объявлять нечего	Нет никаких новых изменений, подлежащих объявлению
A, часть I	☐	☐
A, часть 2 i)	☐	☐
A, часть 2 ii)	☐	☐
A, часть 2 iii)	☐	☐
B i)	☑	☐
B ii)	☑	☐
C	☐	☐
D	☐	☐
E	☐	☐
F	☐	☑
G	☐	☐

Дата 15 апреля 2000г.

Государство-участник Конвенции **Российская Федерация**

Мера укрепления доверия "А" Форма А, часть I

Обмен данными об исследовательских центрах и лабораториях

1.1. Наименование объекта

Научно-исследовательский институт микробиологии Министерства обороны Российской Федерации (НИИ микробиологии МО РФ).

1.2. Курирующая государственная или частная организация или компания

Министерство обороны Российской Федерации.

1.3. Местонахождение и почтовый адрес

НИИ микробиологии МО РФ - Российская Федерация, 610024, г. Киров, Октябрьский проспект, 119.

Центр военно-технических проблем биологической защиты НИИ микробиологии МО РФ, Российская Федерация, 620048, г. Екатеринбург, ул. Звездная, 1.

Вирусологический центр НИИ микробиологии МО РФ - Российская Федерация, 141300, Московская область, г.Сергиев Посад-6, ул. Октябрьская, 11.

1.4. Источник финансирования объявляемой деятельности

Министерство обороны Российской Федерации.

1.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

1.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

Наивысший уровень защиты в НИИ микробиологии МО РФ и Вирусологическом центре НИИ микробиологии МО РФ - BL3. Центр военно-технических проблем биологической защиты НИИ микробиологии МО РФ не проводит работ с патогенными микроорганизмами.

1.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка и испытание технических средств защиты, а также средств и методов профилактики опасных инфекционных заболеваний, индикации патогенных агентов, дезинфекции военной техники и местности. Работы по биодеградации нефтепродуктов и других химических экотоксикантов, экологическому мониторингу НИИ микробиологии МО

РФ и его центров.

В исследованиях использовались возбудители чумы, сапа, мелиоидоза, туляремии, бруцеллеза, легионеллеза, холеры, псевдотуберкулеза, дифтерии, сыпного тифа, вирусных энцефалитов, геморрагических лихорадок, Ку-лихорадки, ботулинический и столбнячный токсины.

2.1. Наименование объекта

Научно-исследовательский институт военной медицины Министерства обороны Российской Федерации .

2.2. Курирующая государственная или частная организация или компания

Министерство обороны Российской Федерации.

2.3. Местонахождение и почтовый адрес

Российская Федерация, 195043, Санкт-Петербург, ул.Лесопарковая,4.

2.4. Источник финансирования объявляемой деятельности

Министерство обороны Российской Федерации.

2.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

2.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (общая площадь 210 кв.м.).

2.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка организационных основ и практических мер биологической (противоэпидемической) защиты войск и сил флота. Исследования, разработки и испытания охватывают следующие группы средств защиты: индикация и идентификация возбудителей опасных инфекций и лабораторная диагностика вызываемых ими заболеваний; протективная профилактика актуальных для войск и сил флота инфекций; экстренная профилактика и этиотропное лечение актуальных для войск и сил флота инфекционных заболеваний; дезинфекция, дезинсекция, репелентная защита и дератизация в очагах инфекционных заболеваний и/или биологического заражения.

В исследованиях использовались возбудители туляремии, бруцеллеза, венесуэльского и западного энцефаломиелита лошадей, восточного энцефаломиелита лошадей, лихорадки Чикунгунья, Ку-лихорадки, хламидиозов, желтой лихорадки, лихорадок долины Рифт и Хунин, лихорадки Денге, клещевой пятнистой лихорадки, герпеса, гриппа, клещевого японского энцефалита, неклостридиальных анаэробов, а также вакцинный штамм возбудителя чумы.

3.1. Наименование объекта

Государственный научный центр вирусологии и биотехнологии "Вектор"

3.2. Курирующая государственная или частная организация или компания

Министерство здравоохранения Российской Федерации

3.3. Местонахождение и почтовый адрес

Российская Федерация, 633159, Новосибирская область, Новосибирский район, пгт. Кольцово

3.4. Источники финансирования объявляемой деятельности

Министерство науки и технологий Российской Федерации

3.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

3.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 с элементами BL4 (общая площадь - 5690 м^2).

3.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение молекулярно-биологических, антигенных, вирулентных и патогенных характеристик вирусов - возбудителей заболеваний человека, разработка и изучение вакцин, включая генно - инженерные, против вирусных инфекций, разработка приборов и методов изучения биоаэрозолей в интересах экологии, медицины и ветеринарии, разработка диагностических тест-систем для экспресс-анализа инфекционных заболеваний.

В исследованиях использовались возбудители венесуэльского и восточного энцефаломиелитов лошадей, клещевого и японского энцефалитов, геморрагических лихорадок (Марбург, Эбола, Боливийская, желтая, Омская, Конго-Крымская, с почечным синдромом, Ласса, Мачупо), вирусных гепатитов A,B,C,D и E, натуральной оспы, гриппа, цитомегаловирусной инфекции, паротита, токсоплазмоза, сифилиса, герпеса, краснухи, лямблиоза, описторхоза, хламидиоза, бешенства, ротавирусы человека 2 типа, ВИЧ-1 и ВИЧ-2, туберкулеза.

4.1. Наименование объекта

Государственный научный центр прикладной микробиологии.

4.2. Курирующая государственная или частная организация или компания

Министерство здравоохранения Российской Федерации.

4.3. Местонахождение и почтовый адрес

Российская Федерация, 142279, Московская область, Серпуховской район, поселок Оболенск.

4.4. Источники финансирования объявляемой деятельности

Министерство науки и технологий Российской Федерации, Министерство экономики Российской Федерации.

4.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

4.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (общая площадь - 4200 м^2).

4.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение структурно-функциональной организации молекулярных факторов патогенности и иммуногенности, в том числе методами генной инженерии, возбудителей инфекционных заболеваний человека и животных. Создание средств профилактики и диагностики.

В исследованиях использовались возбудители туляремии, легионеллеза, сапа, мелиоидоза, сибирской язвы и чумы.

5.1. Наименование объекта

Российский научно-исследовательский противочумный институт "Микроб" Министерства здравоохранения Российской Федерации.

5.2. Курирующая государственная или частная организация или компания

Министерство здравоохранения Российской Федерации.

5.3. Местонахождение и почтовый адрес

Российская Федерация, 410071, г. Саратов, ул. Университетская, 46.

5.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации.

5.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

5.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (четыре лаборатории площадью 132, 270, 350 и 220 м²).

5.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение вопросов эпизоотологии, эпидемиологии и профилактики чумы, а также эпидемиологии и профилактики холеры. Изучение молекулярной генетики возбудителей чумы и сибирской язвы. Конструирование диагностических и иммунопрофилактических препаратов.

6.1. Наименование объекта

Ростовский государственный противочумный научно-исследовательский институт Министерства здравоохранения Российской Федерации.

6.2. Курирующая государственная или частная организация или компания

Министерство здравоохранения Российской Федерации.

6.3. Местонахождение и почтовый адрес

Российская Федерация, 344007, г. Ростов-на-Дону, ул. Горького, 117.

6.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации.

6.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

6.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (три лаборатории площадью 240, 144 и 136 м^2).

6,7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение особенностей биологии возбудителей чумы, туляремии, бруцеллеза, холеры, легионеллеза. Осуществление эпидемиологического надзора. Совершенствование методов индикации и идентификации микроорганизмов.

7.1. Наименование объекта

Волгоградский научно-исследовательский противочумный институт Министерства здравоохранения Российской Федерации.

7.2. Курирующая государственная или частная организация или компания

Министерство здравоохранения Российской Федерации.

7.3. Местонахождение и почтовый адрес

Российская Федерация, 400087, г. Волгоград, ул.Голубинская,7.

7.4. Источники финансирования обьявляемой деятельности

Министерство здравоохранения Российской Федерации.

7.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

7,6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (семь лабораторий площадью 160, 150, 323, 562, 65, 140,5 и 350 м^2).

7.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Совершенствование методов обнаружения возбудителей сапа, мелиоидоза. Разработка средств профилактики и лечения, методов дезинфекции. Изучение микробиологии возбудителей сапа и мелиоидоза; изучение эффективности методов иммунизации; исследование глубоких микозов.

8.1. Наименование объекта

Иркутский противочумный институт Сибири и Дальнего Востока Министерства здравоохранения Российской Федерации.

8.2. Курирующая государственная или частная организация или компания

Министерство здравоохранения Российской Федерации.

8.3. Местонахождение и почтовый адрес

Российская Федерация, 664047, г.Иркутск, ул. Трилиссера, 78.

8.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации.

8.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

8.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (одна лаборатория площадью 90 м²).

8.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение вопросов микробиологии и эпидемиологии региональных природно-очаговых заболеваний (чума, сибирская язва, туляремия, бруцеллез). Диагностика вирусов Марбург, Эбола.

9.1. Наименование объекта

Научно-исследовательский институт эпидемиологии и микробиологии имени Н.Ф.Гамалеи Российской Академии медицинских наук (НИИЭМ им. Н.Ф.Гамалеи РАМН).

9.2. Курирующая государственная или частная организация или компания

Российская Академия медицинских наук.

9.3. Местонахождение и почтовый адрес

Российская Федерация, 123098, Москва, ул. Н.Ф.Гамалеи, 18.

9.4. Источник финансирования объявляемой деятельности

Российская Академия медицинских наук.

9.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

9.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL 3 (одна лаборатория площадью 45 м^2).

9.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка диагностических и вакцинных препаратов, анатоксинов, обоснование схем их применения, разработка новых и совершенствование существующих лабораторных методов диагностики инфекционных заболеваний, методов идентификации микроорганизмов и токсинов. Изучение эпидемиологии, микробиологии и молекулярной биологии микроорганизмов.

В исследованиях использовались возбудители туляремии, бруцеллеза, риккетсиозов, листериоза, легионеллеза, ботулинические токсины.

10.1. Наименование объекта

Всероссийский научно-исследовательский институт защиты животных Министерства сельского хозяйства и продовольствия Российской Федерации.

10.2. Курирующая государственная или частная организация или компания

Министерство сельского хозяйства и продовольствия Российской Федерации.

10.3. Местонахождение и почтовый адрес

Российская Федерация, 600900, г. Владимир, п/о Юрьевец.

10.4. Источники финансирования объявляемой деятельности

Министерство сельского хозяйства и продовольствия Российской Федерации.

10.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

10.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (одна лаборатория площадью 150 м^2).

10.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка вакцин, в том числе генно-инженерных, против ящура, чумы крупного рогатого скота и свиней, болезней Ауески и Гамборо, бешенства. Разработка средств и методов диагностики инфекционных болезней сельскохозяйственных животных. Производство диагностикумов, вакцин и лечебных препаратов ветеринарного назначения.

11.1. Наименование объекта

Институт вирусологии им. Д.И. Ивановского Российской Академии медицинских наук.

11.2. Курирующая государственная или частная организация или компания

Российская Академия медицинских наук.

11.3. Местонахождение и почтовый адрес

Российская Федерация, 123098, Москва, ул.Н.Ф. Гамалеи, 16.

11.4. Источник финансирования объявляемой деятельности

Российская Академия медицинских наук, Министерство науки и технологий Российской Федерации.

11.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

11.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (один блок площадью 18 $м^2$).

11.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка средств и методов индикации и идентификации возбудителей вирусных инфекций, циркулирующих на территории Российской Федерации; разработка средств и методов диагностики, профилактики и лечения гриппа, гепатитов С, и G, герпеса, арбовирусных инфекций; первичный скрининг и оценка противовирусного действия химиопрепаратов и индукторов интерферона.

Изучение биологических свойств штаммов ВИЧ, изолированных на территории России, молекулярной эпидемиологии и патогенеза СПИДа.

12.1. Наименование объекта

Институт биоорганической химии им. М.М.Шемякина и Ю.А.Овчинникова Российской Академии наук.

12.2. Курирующая государственная или частная организация или компания

Российская Академия наук.

12.3. Местонахождение и почтовый адрес

Российская Федерация, 117871, Москва, ул. Миклухо-Маклая, 16/10.

12.4. Источники финансирования объявляемой деятельности

Российская Академия наук.

12.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем BL4 отсутствуют.

12.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (одна лаборатория площадью 120 $м^2$).

12.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Работа не проводится.

13.1. Наименование объекта

Фармацевтическое акционерное общество (ФАО) "Ферейн".

13.2. Курирующая государственная или частная организация или компания

ФАО "Ферейн".

13.3. Местонахождение и почтовый адрес

Российская Федерация, 142530, Московская область, г. Электрогорск, пр. Мечникова, 1.

13.4. Источники финансирования объявляемой деятельности

ФАО "Ферейн".

13.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Один блок площадью 284 $м^2$.

13.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

Нет.

13.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Работа не проводится.

Форма А: часть 2 i)

Объявление национальной программы исследований и разработок в области биологической защиты

I. Имеется ли национальная программа для проведения исследований и разработок в области биологической защиты на территории государства-участника, под его юрисдикцией или контролем где бы то ни было ?

Имеется программа исследований и разработок медицинских и технических средств защиты от биологического оружия (БО).

Форма А: часть 2 ii)

Национальная программа исследований и разработок в области биологической защиты

II. Описание программы исследований и разработок медицинских и технических средств защиты от биологического оружия

1. Целью программы является разработка средств и методов защиты от биологического оружия.

В рамках программы выполнялись следующие основные исследования и разработки:

разрабатывались средства и методы профилактики инфекционных заболеваний, вызываемых вероятными агентами БО ;

изыскивались антибактериальные и противовирусные препараты для профилактики и лечения инфекционных заболеваний, разрабатывались схемы лечения этих заболеваний;

разрабатывались средства и методы диагностики опасных инфекционных заболеваний;

разрабатывались методы и режимы дезинфекции, дезинсекции, репелентной защиты и дератизации в очагах инфекционных заболеваний и/или биологического заражения;

определялись защитные свойства военной техники, средств индивидуальной и коллективной защиты;

разрабатывались, оценивались и совершенствовались методы и технические средства индикации и идентификации возбудителей инфекционных заболеваний.

Общая сумма финансирования в 1999 году - около 68 млн. руб.

Источник - бюджетные ассигнования.

3. Да.

4. Около 10%.

5. Подрядчиками выполняются следующие основные исследования:

Разработка и испытания образцов приборов для диагностики заболеваний человека, а также для оценки микробной загрязненности внешней среды, исследования по созданию новых дезинфицирующих средств и их композиций.

Форма A: часть 2 iii)

Национальная программа исследований и разработок в области биологической защиты

III. Объекты

1.1. Научно-исследовательский институт микробиологии Министерства обороны Российской Федерации (НИИ микробиологии МО РФ).

1.2. НИИ микробиологии МО РФ - Российская Федерация, 610024, г. Киров, Октябрьский проспект, 119

58°36'10" северной широты

49°39'24" восточной долготы.

Центр военно-технических проблем биологической защиты НИИ микробиологии МО РФ - Российская Федерация, 620048, г. Екатеринбург, ул. Звездная, 1

56°47'04" северной широты

60°34'49" восточной долготы.

Вирусологический центр НИИ микробиологии МО РФ - Российская Федерация, 141300, Московская область, г. Сергиев Посад-6, ул. Октябрьская, 11

56°15'13" северной широты

38°07'09" восточной долготы.

1.3. Площадь лабораторных помещений с разбивкой по уровням изоляции: BL2 - 1469,6 м²
BL3 - 6464,6 м²
BL4 - нет

общая площадь лабораторных помещений - 7934,2 м²

1.4. Организационная структура объекта.

I) общая численность сотрудников - 3030 человек.

II) Классификация сотрудников:
военный персонал - 623;
гражданский персонал - 2407.

III) Классификация сотрудников по категориям:
научные работники - 501;
инженерный состав - 224;
лабораторно-технические работники - 574;
административный и вспомогательный персонал - 1731.

IV) Научная специализация научных/инженерных работников:

микробиология, эпидемиология, биохимия, вирусология, иммунология, иммунохимия, биофизика, генетика, аэробиология, прикладная математика, биотехнология, экология.

V) Работают ли на объекте подрядные сотрудники:
подрядные сотрудники на объекте не работают.

VI) Источник финансирования деятельности:
Министерство обороны Российской Федерации.

VII) Уровни финансирования по разделам программы:
исследования - 44,7%
разработки - 32,6%
испытания и оценка - 22,7%.

VIII) Порядок публикации материалов определяется инструкциями, действующими в Министерстве обороны Российской Федерации. Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1999 году по результатам проделанной работы:

Онищенко Г.Г., Васильев Н.Т., Литусов Н.В., Харечко А.Т., Васильев П.Г., Садовой Н.В., Кожухов В.В. Сибирская язва: актуальные аспекты микробиологии, эпидемиологии, клиники, диагностики, лечения и профилактики / ВУНЦ ВЗ РФ. - М., 1999.

Серебрякова Е.В., Калининский В.Б., Медведев Н.П. Двухфазное культивирование Serratia marcescens как способ повышения аэрации глубинных культур// Биотехнология. - 1999. - N 3. - С.63 - 66.

Лазыкин А.Г., Пименов Е.В., Черкасов А.А., Ковтун А.Л., Кузнецов В.Г., Черняльев А.В., Богатырев А.А. Возможность использования лихенина в качестве уплотнителя питательных сред// Там же. - С.76 - 72.

Серебрякова Е.В., Черняльев А.В., Рассанов В.П., Медведев Н.П. Культивирование Serratia marcescens глубинным способом на среде с минеральным азотом// Биотехнология. - 1999.- N 4. - С. 35 -38.

Парамонов И.В., Вахнов Е.Ю., Воробьев А.А. Обнаружение и идентификация холерных вибрионов с использованием ПЦР// Проблемы ООИ. - 1999.- Вып. 79. - С.95 -102.

Рудой Б.А., Телишин А.М., Юрченко А.В., Куклина Е.А., Федотов А.К., Макаренко Г.К., Бакулина Л.В., Ткаленко Е.Ф., Салина О.И.// Разработка препаративного способа получения стафилококкового энтеротоксина типа В для приготовления анатоксина// Там же. - С. 186 - 192.

Медведев Н.П., Красаков В.Д., Венедиктова Л.П., Маношкин В.П. Сравнительная оценка биоцидных свойств активированных растворов перекиси водорода// Там же. - С. 207 - 210.

Воробьев А.А., Воробьев К.А., Дармов И.В., Мельников В.С., Мальцев А.Е. Состояние и перспективы развития судебно-генетической медицины в Кировской области// Материалы XIV Пленума Всерос.общества судебных медиков (17-18 июня 1999 г. Москва) Министерства здравоохранения России. - 1999. - С.112.

Лазыкин А.Г., Черкасов Н.А., Ковтун А.Л., Рогожин А.Э., Нестеров Ю.Е., Кузнецов В.Г. Способ получения лихенина их лишайника// Патент на изобретение N2129159. Зарегистрировано в Гос. реестре изобретений 20.04.99.

Сероглазов В.В., Строчков Ю.И., Кожухов В.В., Амосов М.Ю. Способ поддержания сибиреязвенной вакцины штамма СТИ-1// Патент на изобретение N2142009. Зарегистрировано в Гос. реестре изобретений 27.11.99.

Юдников В.А., Шевцов А.И., Кожухов В.В. Способ глубинного культивирования сибиреязвенного вакцинного штамма СТИ-1// Патент на изобретение N2142010.Зарегистрировано в Гос. реестре 27.11.99.

Дармов И.В., Погорельский И.П., Великанов В.И. Научно-иссле-

довательскому институту микробиологии Министерства обороны Российской Федерации 70 лет// Военно-медицинский журнал. - 1999. - N8. - С.79-81.

Дармов И.В., Маракулин И.В., Погорельский И.П., Новикова Л.Е., Портнягина О.Ю., Соловьева Т.Ф. Профилактика экспериментальной псевдотуберкулезной инфекции с помощью профилактики порином// Бюллетень экспертной биологии и медицины. - 1999. - Т.127, N 2. - С. 221 - 223.

Бочинин Ю.И., Волковский Г.Л., Ивановцев В.Р., Медведев Н.П., Вологова К.С., Матянин Н.И., Плюснин В.П. Аэрозольная дезинфекция препарата "Лемос-1"// Ветеринария. - 1999. - N7. - С.13 - 16.

Пименов Е.В., Медведев Н.П. Экологически чистая система аэрозольной дезинфекции// Проблемы ветеринарной санитарии и экологии. Дезинфекция, дезинсекция, дератизация: - Тез.докл. Междун. науч.конф. 16-17 сент.1999, Москва. - 1999. - С.56 - 57.

Васильев Н.Т., Пименов Е.В., Кожухов В.В., Строчков Ю.И., Зубов В.В. Перспективы создания сибиреязвенных вакцин нового поколения// Иммунология. - 1999. - N 3. - С. 5 - 8.

Борисевич И.В., Потрываева Н.В., Миронов А.Н. Оценка возможности получения протективного антигена вируса Эбола из предварительно инактивированной вируссодержащей суспензии//Материалы науч.конф."Вирусные инфекции на пороге XXI века. Эпидемиология и профилактика". - СПб, 21 - 22 апреля 1999г. - СПб. - 1999. - С.234.

Ломаченкова О.А., Михайлов В.В., Приходько А.В., Хамитов Р.А., Ионов С.Н. Клинико-эпидемиологическая характеристика геморрагических лихорадок, вызываемых вирусами II группы патогенности, оценка их опасности для войск и населения РФ// Там же. - С.142 - 143.

Кириллова С.Л., Ионов С.Н., Махлай А.А. Интегральный метод оценки эффективности противовирусных лекарственных препаратов// Там же. - С. 195 - 196.

Лукин Е.П., Ручко В.М., Махлай А.А. Основные принципы активной профилактики риккетсиозов в XXI веке// Там же. - С. 196 - 197.

Лукин Е.П. Бартонеллезы и эрлихиозы человека - две самостоятельные группы малоизвестных инфекций// Там же. - С. 270.

Лукин Е.П. Манифестация инфекций у человека, вызванная патогенами альфа-группы протеобактерий (риккетсии, бартонеллы и эрлихии) в связи с особенностями патогенеза// Там же. - С.289 - 290.

Маркин В.А., Борисевич И.В., Махлай А.А. Особенности патогенеза вирусных особо опасных геморрагических лихорадок// Патогенные основы лечения острых инфекционных заболеваний (Сборник науч.тр. к 70-летию академика В.И. Покровского). - 1999. - М., С.228 - 236.

Борисевич И.В., Михайлов В.В., Махлай А.А., Хамитов Р.А., Миронов А.Н. Патогенетические принципы специфической профилактики и лечения особо опасных вирусных геморрагических лихорадок// Там же. - С.236 - 244.

Rydkina E.B., Roux Veronigue., Gagua EngeniaM., Predtechenski A.B., Tarasevich I.V., Raoult Didier (Universite de la Mediterrane-e Marseille, France; Russian Academy of Medical Sciences, Moscow, Russia; Moscow Municipal Desinfection Center, Moscow, Russia; Research Center of Virology, Russia) Bartonella quintana in Body Lice Collection from Homeless Persons in Russia// Emerging Infection Diseases. - 1999. - V. 5, N 1. - P.176 - 178.

Борисевич И.В., Грабарев П.А., Евсеев А.А., Ионов С.Н., Маркин В.А., Марков В.И., Махлай А.А., Писцов М.Н., Фирсова И.В., Хамитов Р.А. Лекции по инфекционным болезням (Под редакцией Ющука Н.Д., Венгерова Ю.Я.). Том 1, том 2// Лекции по инфекционным болезням. - 1999. - Москва.

Маркин В.А., Сыромятникова С.И., Лебедев В.Н., Андрощук И.А. Использование серологических методов для идентификации и систематизации некоторых альфа-вирусов// Вопр. вирусологии. - 1999. - N 4. - С.177 - 180.

Корнеев М.А., Проскрякова О.Ф., Ручко В.М., Марков В.И. Молекулярная диагностика микобактериальных инфекций// Там же. - С. 187.

Лукин Е.П., Грабарев П.А. Экология бартонелл и эрлихий, патогенных для человека// Медицинская паразитология и паразитарные болезни. - 1999. - N 4. - С.17 - 21.

1.5. Работы, выполняемые в учреждении в области биологической защиты: создание и усовершенствование специфических средств защиты от инфекционных заболеваний и технологий их производства, разработка средств и методов экстренной профилактики инфекционных заболеваний, определение защитных свойств военной техники, средств индивидуальной и коллективной защиты; усовершенствование методов и средств обеззараживания; разработка на основе изучения патогенеза аэрогенных инфекций методов ранней лабораторной диагностики инфекционных заболеваний; усовершенствование методов и приборов для индикации биологических агентов; разработка средств и методов биологической очистки районов дислокации войск от экологически вредных веществ.

При проведении исследований использовались возбудители чумы, сапа, мелиоидоза, туляремии, бруцеллеза, легионеллеза, холеры, псевдотуберкулеза, дифтерии, сыпного тифа, вирусных энцефалитов, геморрагических лихорадок, Ку-лихорадки, ботулинический и столбнячный токсины.
Наружные исследования биологических аэрозолей не проводились.

2.1. Научно-исследовательский институт военной медицины Министерства Обороны Российской Федерации (НИИ ВМ МО РФ).

2.2. Российская Федерация, 195043, Санкт-Петербург, ул. Лесопарковая, 4.

Географические координаты местоположения:

59°58' 40'' северной широты

30°20' 10'' восточной долготы.

2.3. Площадь лабораторных помещений с разбивкой по уровням изоляции:

BL 2 - 840 м²;

BL 3 - 210 м²;

BL 4 - нет.

Общая площадь лабораторных помещений - 1050 м².

2.4. Организационная структура объекта.

I) Общая численность объекта - 75 человек.

II) Классификация сотрудников:

военный персонал	- 9;
гражданский персонал	- 66.

III) Классификация сотрудников по категориям:

научные работники	- 37;
инженеры	- 2;

административный и вспомогательный персонал – 98

IV) Научная специализация научных/инженерных работников:

эпидемиология, микробиология, вирусология, иммунология, микология, медицинская энтомология и паразитология, дезинфектология, биотехнология, иммунохимия.

V) Подрядные сотрудники на объекте не работают.

VI) Источник финансирования деятельности:

Министерство обороны Российской Федерации.

VII) Уровни финансирования по разделам программы:

исследования – 40 %

разработка – 20 %

испытания и оценка – 40 %

VIII) Порядок опубликации материалов определяется инструкциями, действующими в Министерстве обороны Российской Федерации.

Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1999-2000 по результатам проделанной работы:

Лопатин С.А., Нарыков В.И., Раевский К.К. и др. Питьевая вода и вирусные гепатиты// Тр. конф. "Вирусные инфекции на пороге XXI века: эпидемиология и профилактика". - СПб., 1999. - С.45-46.

Иванов А.А., Гриценко В.В., Захаров Б.Н. Проблема обеззараживания при вирусных гепатитах// Там же. - С. 55 - 56.

Гриценко В.В., Терентьев В.И., Ольшанский Е.Ш., Иванов А.А. Перспективы совершенствования системы обеззараживания питьевой воды// Там же. - С.56 - 57.

Пелешок С.А., Дунаева И.Д., Гриценко В.В. Лабораторная оценка использования синтетических пиретроидов для индивидуальной защиты от кровососущих членистоногих// Там же. - С.60.

Пелешок С.А., Дунаева И.Д. Результаты практических испытаний репеллентов// Там же. - С.67.

Носков Ф.С., Травкин О.В., Яковлева Е.В., Нацалуха В.В., Рытик П.Г. Синтез и изучение фармакологического действия синтетических индукторов цитокинов// Там же. - С.244 - 245.

Леншина Е.В., Старенченко В.В., Цикаришвили Г.В., Травкин О.В., Носков Ф.С. Биологическая активность нового противовирусного препарата анандина и его аналогов при экспериментальных вирус-

ных инфекциях// Там же. - С. 253.

Травкин О.В., Вахалова Е.В., Носков Ф.С., Кацалуха В.В. Противовирусная активность новых гидрофобных аналогов анандина // Там же. - С. 253 - 254.

Новосадов А.М., Оникиенко С.Б., Антонов А.А., Львов И.В., и др.// Перспективные пути профилактики и лечения хронических заболеваний желудочно-кишечного тракта, возникающих при воздействии инфекционных возбудителей и экотоксикантов// Там же. - С. 267.

Нуралова А.М., Позняк А.Л. Варианты использования перевиваемой культуры клеток в проблеме хламидийных инфекций// Там же. - С. 285.

Нуралова И.В. Морфогенез и возможности лабораторного обнаружения хламидий// Там же. - С. 286.

Земляной А.В., Сметанин А.Л., Орлов К.А. Применение производных акридона при хронической инфекции и экологически обусловленных заболеваниях// Там же. - С. 286.

Авраменко В.С., Иванов А.А. Проблема устойчивости к средствам обеззараживания микрофлоры, выделенной в лечебно-профилактических учреждениях МО//Тр. конф. "Современные технологии диагностики и терапии инфекционных болезней". - СПб., 1999. - С. 5 - 6.

Баскакова А.Г., Пак Н.В., Вобликов И.В., Зинкин В.Н., Кузьмина И.В., Степанов А.В. Влияние импульсного шума на резистентность мышей к вирусной инфекции// Там же. - С. 32 - 22.

Добрынин В.М., Зинкин В.Н., Вобликов И.В., Родионов Г.Г. Нарушение микробиоценоза кишечника белых мышей под влиянием высокоинтенсивного шума // Там же. - С. 65 - 66.

Добрынин В.М., Раевский К.К., Шепелин А.Н., Добрынина И.А. Новая отечественная питательная среда с эозин-этиленовым синим// Там же. - С. 66 - 67.

Лобзин Ю.В., Львов Н.И., Пак Н.В., Мисников О.П., Василенко А.Ж. Динамика показателей неспецифической резистентности у больных ОРЗ при различных схемах лечения// Там же. - С. 160 -161.

Нуралова И.В., Позняк А.Л. Серодиагностика хламидийных инфекций// Там же. - С. 221 - 222.

Нуралова И.В., Позняк А.Л., Добрынин В.М., Шестаев А.Ю. Ассоциированные хламидийно-трихомонадные урогенитальные инфекции// Там же. - С.222.

Пак Н.В., Позняк А.Л., Баскакова А.Г., Степанов А.В. Влияние

комплексной ассоциированной вакцинации на продукцию интерферона в организме // Там же. – С. 227 – 228.

Позняк А.Л., Стариченко В.В., Кашлуха В.В., Симбирцев А.С. Эффективность сочетанного применения доксициклина и бестима при лечении экспериментального хламидийного сепсиса на фоне иммунодепрессии// Там же. – С.240 – 241.

Свиридов Л.П., Позняк А.Л., Клопунова О.В., Добрынин В.М. Серодиагностика бактероидной инфекции в клинике инфекционных болезней// Там же. – С.269 -270.

Степанов А.В., Позняк А.Л., Василенко А.Ж., Мисников О.П. Функционирование иммунной системы при одномоментном введении в организм нескольких иммунобиологических препаратов// Там же. – С.288 – 289.

Степанов А.В., Василенко А.Ж., Мисников О.П., Позняк А.Л., Литусов Н.В. Теоретические аспекты ассоциированного и комплексного применения иммунобиологических препаратов //Тр. конф. "Диагностика, лечение и профилактика инфекционных заболеваний. Биотехнология. Ветеринария". – Екатеринбург,1999. – С.235-237.

Харечко А.Т., Мисников О.П., Поберий И.А., Литусов Н.В., Степанов А.В., Доронин А.Н. Перспективность использования биоспорина для медицинского обеспечения войск в экстремальных ситуациях// Там же. – С. 265 – 266.

Vasilenko A.Z., Fatalieva S.V., Yablonskaya V.A., Kartseva N.A., Misnikov O.P., Tokarevich N.K., Tarasevich I.V. Testing of inactivated combinated phase I Coxiella burnetii vaccine in volunteers// Inernational Conf. on Rickettsia Disease. – France, Marseille, 1999. – P.134.

2.5. Работы, выполняемые в учреждении в области биологической защиты:

разработка и испытание медицинских средств и методов противоэпидемической (биологической) защиты войск и сил флота: индикации и идентификации возбудителей опасных инфекций и лабораторной диагностики вызываемых ими заболеваний; превентивной и экстренной профилактики и этиотропного лечения актуальных для войск и сил флота инфекционных заболеваний; способов дезинфекции, дезинсекции, репеллентной защиты и дератизации в очагах инфекционных заболеваний и/или биологического заражения.

В исследованиях использовались возбудители туляремии, бруцеллеза, венесуэльского и западного энцефаломиелита лошадей, восточного энцефаломиелитов лошадей, лихорадки Чикунгунья, Ку-лихорадки, хламидиозов, желтой лихорадки, лихорадок долины Рифт и Хунин, лихорадки денге, клещевой пятнистой лихорадки, герпеса, гриппа, клещевого японского энцефалита, неклостридиальных анаэробов, вакцинный штамм возбудителя чумы.

Наружные исследования биологических аэрозолей не проводились.

3.1. Государственный научный центр - Государственный научно-исследовательский институт биологического приборостроения Министерства здравоохранения Российской Федерации.

3.2. Российская Федерация, 123424, Москва, Волоколамское шоссе, 75.

3.3. Помещений с уровнями изоляции BL2, BL3, BL4 нет.

Общая площадь лабораторных помещений - 357 м².

3.4. Организационная структура объекта

I) Общая численность сотрудников, участвующих в национальной программе исследований и разработок в области биологической защиты - 23 человека.

II) Классификация сотрудников:
военный персонал - 1;
гражданский персонал - 22.

III) Классификация сотрудников по категориям:
научные сотрудники - 6;
инженеры - 6;
техники - 8;
административный и вспомогательный персонал - 3.

IV) Научная специализация научных/инженерных работников:
приборостроение, дезинфекционное дело.

V) Работают ли на объекте подрядные сотрудники:
Подрядные сотрудники в учреждении не работают.

VI) Источники финансирования деятельности, осуществляемой в учреждении

Финансирование работ по программе биологической защиты осуществляется Министерством обороны Российской Федерации.

осуществляется Министерством обороны Российской Федерации.

VII) Уровни финансирования по разделам программы:

исследования - 15%
разработки - 75%
испытания и оценка - 10%

IX) Публикаций в 1999 г. не было.

3.5. Работы, выполняемые в учреждении в области биологической защиты: разработка и испытания образцов технических средств (приборов), наборов для диагностики инфекционных заболеваний человека, а также оценки микробной загрязненности объектов внешней среды. Исследования по созданию новых дезинфектантов и их композиций.

Наружные исследования биологических аэрозолей не проводились.

Мера укрепления доверия "В" Форма "В"

- Обмен информацией о вспышках инфекционных заболеваний и аналогичных явлениях, вызванных токсинами

В 1999 году отклоняющихся от нормы вспышек инфекционных заболеваний или аналогичных явлений, вызванных токсинами, на территории Российской Федерации не зарегистрировано

Мера укрепления доверия "С": Форма "С"

- Поощрение публикации результатов и содействие использованию знаний

Поощряются публикации биологических исследований в доступных научных журналах, а также участие ученых и специалистов в конференциях, симпозиумах, встречах.

Публикации исследовательских центров и лабораторий, охватываемых в соответствии с мерой укрепления доверия "А" часть I, в 1999 году:

Азаев М.Ш., Донченко Н.А. Количественное определение маточного молочка в меде методом электофореза белков в полиакридном геле// Научное обеспечением ветеринарных проблем в животноводстве. - Новосибирск, 1999. - С.319 - 321.

Акименко З.А., Офицеров В.И., Шапров В.В., Ястребов С.И. Разделение с помощью ВЭЖХ белков вирусов клещевого энцефалита и венесуэльского энцефаломиелита лошадей и их строение//Биоорган. химия. - 1999. - Т.25,N 4. С.253-256.

Андреева М.А., Байбаков В.И., Молокеев А.В., Яцентюк Р.М., Карих Т.Л., Криницина З.В., Ильина Р.М. Питательная среда для производства жидкого концентрата бифидобактерий//Биотехнология. - 1999.- N 4.- С.76-80.

Анкилов А.Н., Бакланов А.М., Бородулин А.И., Буряк Г.А., Малышкин С.Б., Олькин С.Е., Пьянков О.В., Пьянкова О.Г., Сафатов А.С., Сергеев А.Н. Оценка биологической компоненты атмосферного аэрозоля на юге Западной Сибири// Оптика атмосферы и океана. 1999. - Т.12,N6.-С.507 - 511.

Анкилов А.Н., Бакланов А.М., Бородулин А.И., Буряк Г.А., Малышкин С.Б., Олькин С.Е., Пьянков О.В., Пьянкова О.Г., Сафатов А.С., Сергеев А.Н. Оценка биологической компоненты атмосферного аэрозоля на юге Западной Сибири// Физика атмосферного аэрозоля: Тез. конф.(Москва, 12 - 17 апр. 1999г.)._ Москва, 1999. - С.28 - 30.

Бачинский А.Г., Ярыгин А.А., Наумочкин А.Н., Низоленко Л.Ф., Куличков В.А. Сетевая версия банка образов белковых семейств

PROF_PAT 1 1// Молекуляр. биология. – 1999. – Т.33,N 6. – С.975 – 980.

Богрянцева М.П., Трошкова Г.П., Мазуркова Н.А., Дешина А.В., Ночевный В.Т. Экспресс – метод контроля качества питательных сред для культур клеток млекопитающих// Биотехнология. – 1999. N5. – С.87 – 95.

Богрянцева М.П., Трошкова Г.П., Мазуркова Н.А., Ночевный В.Т. Изучение сроков годности и причин снижения качества сухих стерильных питательных сред// Биотехнология. – 1999. N 4. – С.49 – 54.

Бородулин А.И., Десятков Б.М., Лаптева Н.А. Определение первых моментов времени превышения заданного уровня концентрации атмосферной примеси// Оптика атмосферы и океана. – 1999. – Т.12,N 7. – С.653 – 656.

Гамалей С.Г., Даниленко Е.Д., Емельянова А.В., Лебедев Л.Р., Пустошилова Н.М., Масычева В.И. Исследование особенностей фармакинетики нового структурного аналога фактора некроза опухолей альфа//Сб. науч. тр. сотрудников НИКТИ БАВ, посвящ. 25-летию ГНЦ ВБ "Вектор". С.27 – 34.

Гетманова Т.Н., Нечаева Е.А., Сенькина Т.Ю., Колокольцова Т.Д., Юрченко Н.Д., Шумакова О.В., Морфогенез и репродукция вируса кори в диплоидных клетка человека, перспективных для производства иммунобиологических препаратов//Биотехнология. – 1999. – N 4. – С. 44 – 50.

Гетманова Т.Н., Нечаева Е.В., Юрченко Н.Д., Царева А.А. Ультраструктура диплоидных клеток человека Л-68, инфицированных вирусов краснухи// Вопр. вирусологии. – 1999. – Т.44, N3. – С.126 – 130.

Дадаева А.А.,Чепурнов А.А., Сизикова Л.П., Чепурнова Т.С. Влияние инфицирующих доз вируса Эбола на выживаемость и иммунобиологические показатели у морских свинок// Вопр. вирусологии. – 1999. – Т.44,N5. – С.217 -220.

Дедкова Л.М., Волков Г.Н., Серова О.А., Беланов Е.Ф., Бермотов Н.И., Кротова Б.А., Офицеров В.И. Выявление антител к антигенам трофозоитов лямблий иммуноферментным методом// Мед. паразитология и паразитрн. болезни. – 1999. – N1. – С.46 – 48.

Денисова Л.Я., Батурина И.И., Закабунин А.И., Афиногенова Г.Н., Пустошилова Н.М. Определение примесей липосахаридов в пре-

[illegible] АМН. [illegible] 1999. [illegible] С. 109 - 112.

[illegible] Пичугин А.В., [illegible] Афиногенова [illegible] Сравнительное [illegible] липосахаридов в при[illegible] НИТИ [illegible] 25-летию ГНЦ ВБ "Вектор" [illegible] 1999. [illegible]

Зыкитов В.У., Ефременко [illegible] Борисулин А.И. Численное моделирование структуры аэрозольных "шапок" над городом от источников, находящихся [illegible] Физика атмосферы и океана. [illegible]

Зыкитов В.М., [illegible] Борисулин А.И., Ахтырова [illegible] Определение некоторых характеристик источника аэрозольных примесей путем решения обратной задачи их распространения в атмосфере // Физика атмосферы и океана. — 1999. — Т.35, N [illegible] С. 190 - 199.

[illegible] Данилова [illegible], Чарыева [illegible], Марьнова В.И., [illegible] Мандахунов [illegible] Лечебные свойства мазевой формы [illegible] камчатского краба Paralithodes [illegible] Новые информационные технологии в медицине и экологии: Тез. [illegible] Междунар. конф. Украина, Крым, Гурзуф, 31 мая - 11 июня 1999. [illegible]

[illegible] В.В., [illegible] А.А., Агафонова [illegible], Кочнева Т.Г. [illegible] липосомального препарата, содержащего человеческий рекомбинантный альфа-2 интерферон // Вест. РАМН. — 1999. — N12. — С.16 - 21.

Исаев В.Н., Петрунин М.А., Майданик А.Г., Карпович Л.Г., Каледина [illegible], Бектемиров Т.А., Карпова Е.В., Немцов [illegible], Мунтьянова М.А., Крюк П.И., [illegible] Бондарчук В.Б., Усова С.В., [illegible] М.А. Характеристика реактогенных и иммуногенных свойств детского варианта отечественной вакцины против гепатита А "ГЕП-А-ин-ВАК" // Вопр. вирусологии. — 1999. — Т.44, N3. — С.133 - 136.

[illegible] Мошкина [illegible], Никулин Л.Г. Генетическая и биологическая характеристика неинбредных мышей колонии ICR // Генетика. — 1999. — Т.35, N2. — С. 266 - 271.

[illegible] Н.А., Ерошкин А.М., [illegible] Веремечкин [illegible], Муравьев [illegible], Котов А.К., Лигарева [illegible], Симбирцев А.С., Романович [illegible], Бажан С.И., Шишкунов [illegible], Ильичев А.П. Сравнительные испытания новых иммуногенов и способов их доставки на мелких ла-

[illegible] животных. Цитология [illegible] — № 2. — С. [illegible]

[illegible] Т.П., [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] И.В., [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] — 1999. — Т. 41, № 3/4. — С. [illegible]

Костина Г.А., Радаева И.Ф. Влияние [illegible] на пролиферативную активность культивируемых клеток [illegible] // Цитология. — 1999. — Т. 41, № 3/4. — С. [illegible]

Костина Г.А., Радаева И.Ф. Использование [illegible] в медицине и косметологии // Косметика и медицина. — [illegible]

Костина Г.А., Радаева И.Ф., [illegible] [illegible] Изучение антимикробной активности [illegible] [illegible] — 1999. — С. 41.

[illegible] В.Т., [illegible] И.В., [illegible] Получение и характеризация мышиных гибридом, секретирующих специфические моноклональные антитела к [illegible] антигену [illegible] // Мед. паразитология и паразитарные болезни. — [illegible]

[illegible] А.А., Ставский Е.А., [illegible] [illegible] нов В.А., [illegible] Применение аэрозольного метода для определения эффективности фильтров для очистки воздуха с использованием аэрозолей диэтилфталата и [illegible] технология. — 1994. — 53. — С. 57—62.

Мазуркова Н.А., [illegible] М.Г., [illegible] Костина Г.В., Трошкова Г.П. Разработка [illegible] питательных [illegible] для клеточной биотехнологии [illegible] культур клеток [illegible] // Цитология. — 1999. — Т. 41, № 3/4. — С. 290.

Максютов А.З., Шустов А.В., [illegible] [illegible] ров А.Н., [illegible] [illegible] [illegible] Сравнительная

исследование распространенности маркеров вируса гепатита С у клинически здорового человека пос. Мендур - Соккон (республика Алтай) с использованием химерного пептида СП43// Новые информационные технологии в медицине и экологии: Тр. VI междунар. конф. (Украина, Крым, Ялта-Гурзуф, 31 мая - 12 июня 1998 г.). М., 1999. - С.432.

Мартынец Л.Д., Сорокина Е.А., Сироткина Т.В., Мазуркова Н.А., Богрянцева М.П., Трошкова Г.П. Культивирование клеток млекопитающих с применением сухих стерильных питательных сред на основе ферментативных гидролизатов// Биология клетки в культуре: Тез. докл. Всеросс.симп. (СПБ., 20 - 22 окт.1998 г.)//Цитология. - 1999. - Т.41, N 3/4 - С.290.

Масычева В.И. Роль биотехнологии в современных направлениях разработки лечебно - диагностических средств// Сб.науч. тр. сотр. НИКТИ БАВ: Посвящ. 25-летию ГНЦ ВБ "Вектор". - Бердск, 1999. - С.5-18.

Масычева В.А., Сысоева Г.М., Даниленко Е.Д., Романов В.П. Исследование противоопухолевых свойств препарата ФНО-альфа с производными гематопорфирина // Сб. науч.тр. сотрудников НИКТИ БАВ: Посвящ.25-летию ГНЦ ВБ "Вектор". - Бердск, 1999. - С.41 -43.

Масычева В.И., Фадина В.А., Даниленко Е.Д., Сысоева Г.М., Ратнер Г.М., Стахеева М.Н., Степовая Е.А., Хлусова М.Ю., Шерстобоев Е.Ю., Пустошилова Н.М. Моделирующее действие рекомбинантного человеческого фактора некроза опухоли бета на гуморальный иммунный ответ зависит от генотипа экспериментальных животных// Сб. науч. тр. сотрудников НИКТИ БАВ: Посвящ. 25-летию ГНЦ ВБ "Вектор". - Бердск, 1999. - С.19 - 25.

Медведев А.А., Трусова Н.Н., Черный С.Г., Шаров С.В. Численное исследование аспирации аэрозольных частиц из потока в щелевой пробоотборник// Оптика атмосферы и океана. - 1999. - т.12.,N 6. - С.562 - 564.

Могилевкина М.Ф., Шипачев В.А., Трошкова Г.П., Мазуркова Н.А., Мартынец Л.Д., Богрянцева М.П. Синтез и цитотоксическая активность N1 (2-тетрагидрофуранил)-5-фторурацилатных комплексов платины// Хим.-фарм. журнал. - 1999. - N 2. - С. 12 -14.

Молокеев А.В., Байбаков В.И., Никулин Л.Г., Карих Т.Л., Яцентюк Р.М., Молокеева Н.В. Технология производства бифидокефира и изучение его полезных свойств// Биотехнология. - 1999. - N 4. -

С.86 -91.

Орешкова С.Ф., Бурцева Л.И., Манохина О.В., Пучкова Л.И., Калмыкова Г.В., Михайлова В.М., Репин В.Е., Ильичев А.А. Идентификация и паспортизация штаммов Bacillus thuringiensis методом геномной дактилоскопии с использованием биотинилированной ДНК фага М13// Генетика. - 1999. - Т.35, N 6. - С.751 - 755.

Панин Л.Е., Лукашев В.А., Гимаутдинова О.И. Антигенная мимикрия вируса иммунодефицита ВИЧ-1 как следствие структурного сходства белков GP120 аполипопротеина А-1 человека// Иммунология. - 1999.- N 2.-С.13 - 15.

Панин Л.Е., Тузиков Ф.В., Тузикова Н.А., Харьковский А.В., Усынин И.Ф. Влияние комплекса тетрагидрокортизол аполипопротеин А-1 на биосинтез белка в гепатоцитах и на вторичную структуру эукариотической ДНК// Молекуляр. биология. - 1999. - Т.33, N 4. - С.673 - 678.

Перминова Н.Г., Тимофеев И.В., Палецкая Т.Ф. Лабораторная диагностика инфекции вирусами герпеса человека 6-го и 7-го типов// Биотехнология. - 1999. - N 2. - С. 89 - 95.

Подгорный В.Ф., Максютов А.З., Тимофеев И.В., Перминова Н.Г. Стратегия создания вакцины против ВИЧ/СПИД с учетом эволюционной вариабельности вируса иммунодефицита человека// Русс. журнал ВИЧ/СПИД и родственные проблемы. - 1999. - Т.3, N 1. - С.39 - 40.

Подоплекина Л.Е., Стронин О.В., Черный Н.Б. Результаты совместного применения иммуноферментного анализа и реакции непрямой гемагглютинации для выявления вируса клещевого энцефалита в клещах, питавшихся на людях//Мед. паразитология и паразитрн. болезни. - 1999. - N 3. - С. 11 - 13.

Полтавченко А.Г., Агафонов А.П., Ничеухина С.Н., Караваев В.С., Игнатьев Г.М. Использование иммуносуспензий на основе углеродных маркеров для определения антител к вирусу паротита методом поверхностного дот-иммуноанализа// Биотехнология. - 1999. - N 3. - С.86 - 91.

Порываев В.Д., Безуглов С.Г., Болдырев А.Н., Алексеева А.Г. Стабилизация вируса гриппа антиоксидантами// Вопр. вирусологии. - 1999. - Т.44, N 1. - С.24 - 29.

Пустошилова Н.М., Афиногенова Г.Н., денисова Л.Я., Акименко З.А. Контроль качества биологических препаратов, полученных методами генной инженерии// Сб. науч. тр. НИКТИ БАВ: Посвящ. 25-летию

ГНЦ ВБ "Вектор". – Кольцово, 1999. – С.[illegible]

Рябинин В.А., Денисов А.Ю., Пышный Д.В., Абрамова Т.В., Синяков А.Н., Власов В.В. Стабилизация ДНК-дуплексов [illegible] ными лигандами. Образование комплексов типа [illegible] с параллельной укладкой лигандов в малой бороздке // Докл. РАН. – 1999. – Т.368, N 6. – С.[illegible] – [illegible].

Сафронов П.Ф., Рязанкина О.И., Петров Н.А., Тотменин А.В., Колосова И.В., Щелкунов С.Н. Структурно-функциональная организация генома генома вируса оспы коров, штамм GRI-90. I. Сравнительный анализ структуры левого видоспецифического района генома ортопоксвирусов // Молекуляр. биология. – 1999. – Т.33, N [illegible]. – С.[illegible] – 302.

Сафронов П.Ф., Тотменин А.В., Рязанкина О.И., Щелкунов С.Н. Структурно - функциональная организация генома вируса оспы коров, штамм GRI-90. II. Функциональная характеристика левого видоспецифического района генома // Молекуляр. биология. – 1999. – Т.33, N 2. – С.303 – 313.

Семенихин В.И., Пушкарев А.Т., Еремкина С.Ф., Шевченко А.С., Чекишев В.М., Ильичев А.А. Разработка методов щелочной экстракции хромосомной ДНК из бруцелл для диагностики бруцеллеза с помощью помощью метода полимеразной цепной реакции // Молекуляр. генетика, микробиология и вирусология. – 1999. – N 1. – С.[illegible].

Сергеев А.Н., Пьянкова О.Г., Булычев Л.Е., Петрищенко В.А., Пьянков О.В., Жуков В.А., Рыжиков А.Б., Шишкина Л.Н., Котляров Л.А., Порываев В.Д. Чувствительность белых мышей к вирусу гриппа (А/АИЧИ/2/68) при аэрогенном заражении // Вопр. вирусологии. – 1999. – Т. 44, N 2. – С.60 –71.

Сизов А.А., Одегов А.И., Хомов В.В. Удаление гемоглобина и его производных из препаратов белка и нуклеиновых кислот с использованием карбоксилметилцеллюлозы // Биотехнология. – 1999. – N 4. – С.32 – 34.

Сорокин А.В., Казачинская Е.И., Качко А.В., Иванова А.В., Букреев А.А., Разумов И.А. Сравнительное исследование антигенных и иммуногенных свойств природного и рекомбинантного белков VP35 вируса Марбург // Вопр. вирусологии. – 1999. – Т. 44, N 5. – С.209 – 213.

Тикунова Н.В., Николенко Н.Г., Протопопова Е.В., Котелкин А.Т., Локтев В.Б., Белавин П.А., Нетесова Н.А., Дяев С.М., Ильичев В.В. Получение моноклональных антител к [illegible] гликопротеину Е вируса клещевого энцефалита // Вопр. вирусологии. — 1999. — Т. 44, N 2. — С. [illegible].

Тимофеев И.В., Першикова [illegible], Смирнова Т.А. Вирус гриппа [illegible] новый представитель [illegible] // Биотехнология. — 1999. — N 1. — С. 44 — 47.

[illegible] В.П., [illegible] Г.И., [illegible] Н.Н., Шустов А.В., Чекрыгина Е.Г. Молекулярная характеристика вирусного гепатита [illegible] // Эпидемиология и инфекц. болезни. — 1999. — N [illegible]. — С. [illegible].

[illegible] В.Т., [illegible], [illegible] В.В., [illegible] В. [illegible] генетических матриц в [illegible] // [illegible] и химия. — 1999. — Т. [illegible].

Трошкова Г.П., [illegible] Е.Г., [illegible] Л.П., Петрищенко В.А. Изучение уровня пирогенности и путей снижения сухих стерильных питательных сред // Биотехнология. — 1999. — N 4. — С. 49 — 5[illegible].

Фадина В.А., Даниленко Е.Д., Махмудова Р.И. Повышение активности клеток мононуклеарной фагоцитирующей системы под действием рекомбинантного человеческого фактора некроза опухоли бета // Сб. науч. тр. сотрудников НИКТИ БАВ. Посвящ. 25-летию ГНЦ ВБ "Вектор". — Бердск, 1999. — С. 35 — 41.

Фролова И.В., Трошкова Г.П., Нимчий Л.П. Разработка технологии изготовления сухих стерильных питательных сред для культур клеток млекопитающих // Биотехнология. — 1999. — N4. — С. 38 — 44.

Чепурнов А.А., Дадаева А.А., Гладкова Л.П. Влияние повторных введений препарата вируса Эбола на динамику иммунобиологических показателей // Бюлл. эксперим. биологии и медицины. 1999. — Т. 127, N 1. — С. 61 — 65.

Шишкина Л.Н., Сергеев А.Н., Пьянкова О.Г., Булычев Л.Е., Петрищенко В.А., Шишкин А.В., Буряк Г.А., Бочаров Е.Ф., Жуков В.А. Влияние глюкокортикоидного иммунодепрессанта аналога на устойчивость мышей к вирусу гриппа // ЖМЭИ. — 1999. — N 4. — С. 90 — 93.

Шишкина Л.Н., Сергеев А.Н., Пьянкова О.Г., Булычев Л.Е., Петрищенко В.А., Шишкин А.В., Буряк Г.А., Бочаров Е.Ф., Жуков В.А. Изменение устойчивости мышей к вирусу гриппа A/Aichi/2/68 под влиянием глюкокортикоидного аналога // Вопр. вирусологии. — 1999. — Т. 44, N 6. — С. 272 — 275.

Шустов А.В., Мишин В.П., Киселев Н.Н., Максютов А.З., Несте-

сов С.В., Робертсон Б.Д. Встречаемость маркеров и генотипическое разнообразие вируса гепатита С в Западной Сибири// Новые информационные технологии в медицине и экологии: Тр. [illegible] междунар. конф. (Украина, Крым, Ялта - Гурзуф, 31 мая - 12 июня 1999 г.). - М., 1999. - С.232 - 234.

Ankilov A.N., Baklanov A.M., Borodulin A.I., Buryak G.A., Malyshkin S.B., Olkin S.E., Pyankov O.V., Pyankova O.G., Safarov A.s., Sergeev A.n. Estimation of biological components of the atmospheric aerosol in the south of Wesern Siberia// J. Aerosol Sci. - 1999. - V.30, Suppl.1. - P.723 - 724.

Belan B.D., Borodulin A.I., Buryak G.A., Olkin S.E., Shevchenko M.V., Petrushenko V.A., Pyankov O.V., Reznikova I.K., Safarov A.s., Sergeev A.N. Preliminary estimation of atmospheric biogenic aerosol over a forest area in the south of Western Siberia//J. Aerosol Sci. - 1999. - V.30, Suppl.1. - P.617 - 618.

Bilbao G., Contreras J.L., Zhang H.-G., Pike M.J., Overturf K., Mikheeva G., Krasnykh V., Curiel D.T. Adenovirus-mediated gene expression in vivo is enhanced by the antiapoptotic Bcl-2 gene// J. of Virol. - 1999. - V.73, N 8. - P.6992 - 7000.

Chepurnov A.A., Tuzova M.N., Ternovoy V.A., Chernukhin I.V. Supressive effect of Ebola virus on T-cell profileration in vitro is provided by GP-125 kD viral protein// Immunol. Lett. - 1999. V.68. - P.257 - 261.

Frolov I., Agapov E., Hoffman T.A., PragaiB.M., Lippa M., Schesinger., Rice C. Selection of RNA replications carable of persistent noncitopatic in mammalian cells//J. of Virol. - 1999. - V.73, n5. - P.3854 - 3865.

Gal F.L., Kiprianov S.M/ Moldenhauer G., Little M. Di-,tri and tetrameric singl chain Fv antibody fragments against human CD19: effect of valency on cell binding// FEBS Lett. - 1999. - V.453. - P. 164 - 168.

Getmanova T.K., Chepurnov A.A., Machova N.M., Nechaeva E.n., Kolokoltsova T.D. Comparative study of the cell cultures perspective for rubella production// Product from cells, cells as products:Abstr. 16th ESAT Meet. (Logano,Switzeland, Apr.25-29,1999). - P.5.05.192.

Hall R.A., Khromykh A.A., Mackenzie J.m., Scherret J.H., Mackenzie J.S. Loss of dimerisation of the nonstractural protein

NS1 of Kunjin virus delays viral replication and reduce virulence in mice, but still allows secretion of NS1// Virology. - 1999. - V.264, N1. - P.66 - 75.

Khromykh A.A., Sedlak P.L., Westaway E.G. Trans-complementation analysis of the flavivirus Kunjin ns5 gene revealas essential role for translation of the N-terminal half in RNA replication// J. Virol. - 1999. - V.73, N 11. - P.9247 - 9255.

Khromykh A.A., Sedlak P.L., Guyatt K.J., Hall R.A., Westaway E.G. Efficient trans-complementation of the flavivirus Kunjin NS5 protein but not of the NS1 protein requires its coexpression with other components of the viral replicase// J.Virol. - 1999. - V.73, N 12. - P.10272 - 10280.

Kolokoltsova T.D., Yurchenko N.D., Nechaeva E.N., Isaenko A.A., Zhumakova O.V., Dermanova T.N. Creation and maintenance of certified banks of cells suitable for production of healing and immunological preparation// Product from cells, cells as products: Abstr. 16th ESACT Meet. - Lugano, Switzeland, Apr.25-29,1999). - P.8.05.202.

Kotov A., Falany J.L., Wang J., Falany C.N. Regulationof estrogen activity by sulfation in human Ishikava eendometrial adenocarcinoma cells// J. Steroid Biochem. and Mol. Biol. - 1999. - V.68. - P.137 - 144.

Kudoyarova-Zubavichene N.M., Sergeev N.n., Chepurnov A.A., Netesov S.V. Preparation and use of hiperimmune serum for prophilaxis and therapy of Ebola virus infection// J.Infect.Dis. - 1999. - V.179, Suppl.1. - S218 - 223.

Little M., Kipriyanov S.m. Recombinant antibodes: Constraction and production// Antibodies in diagnosis and therapy. Technologies, mechanisms and clinical data/ Ed.Matsku E., Stanel R.A. - Harwood Acad. Publ., 1999. - P.1 - 48.

Major M.E., Mihalik K., Fernandez J., Seidman J., Kleiner D., Kolykhalov A.A., Rice C.M., Feinstone S.M. Long- term follow-up of chimpanzees inoculated with the first infectious for hepatitis C virus// J.Virol. - 1999. - V.73, N 4. - P.3317 - 3325.

Medvedev A.A., Cherny S.G., Sharov S.V., Borodulin A.I. A numerical study of aspiration of aerosol particles into thin-walled tube at rught angle with respect to the flow// J.Aerosol Sci.

– 1999. – V.80, Suppl. 1. – P. 746 – 756 (Abstr. of the 1999 Europ. Nephrol. Conf.).

Muhlberger E., Weik M., Volchkov V.E., Klenk H.-D., Becker S. Comparison of the transcription and replication strategies of Marburg virus and Ebola virus by using artificial replication systems// J.Virol. – 1999. – V.73, N 3. – P.2333 – 2342.

Niklasson B., Kinnunen L., Hornfeldt B., Horling B., Benemar C., Hedlund K.O., Matskova L., Hyypia T., Winberg G. A new picornavirus isolated from bank voles (Clethrionomys glareolus)// Virology. – 1999. – V.255, N 1. – P.86 – 93.

Sandakhchiev L.S., Marennikova S.S., Stavskiy E.A. Adherence to WHO containment and security recommendations// WHO Ad Hoc Meeting (14-15 Jan., 1999, Geneva, Switzerland). – P.1 – 18.

Sosnovtseva S.A., Sosnovtsev S.V., Green K.Y. Mapping of the feline calicivirus proteinase responsible for autocatalytic processing of the nonstructural polyprotein and identification of a stable proteinase-polymerase precursor protein// J. Virol. – 1999. – V.73, N 8. – P. 6626 – 6632.

Varnavski A.N., Khromykh A.A/ Noncytopatic flavivirus replication RNA-based system for expression and delivery of heterologous genes// Virology. – 1999. – V.255, N 2. – P.366 – 375.

Volchkov V.E., Volchkova V.A., Chepurnov A.A., Blinov V.M., Dolnik O., Netesov S., Feldman H. Characterization of the L gene and 5 trailer region of E.ola virus// J. Virol. – 1999. – V.80, N 2. – P.355 – 362.

Westaway E.G., Khromykh A.A., Mackenzie J.M. Nascent flavivirus RNA colocolizet in Sinu double-stranded RNA in stable replication complexes//Virology. – 1999. – V.258, N 1. – P.108 – 117.

Potechin S.A., Loseva O.I., Tictopulo E.I., Dobritsa A.P. Transition State of the Rate-Limiting Step of heat Denaturation of Cry3A delta-Endotoxin// Biochemistry. – 1999. – V.38. – P.4121 – 4127.

Stepashina V.N., Panfertsev E.A., Korobova O.V., Shemyakin I.G., Stepanshin Yu.G., Medvedeva I.M., Dorozhkova I.R. Drug-resistant strains of Micobacterium tuberculosis isolated in Russia// Int.J Tuberc. Lung Dis. – 1999. – V. 3(1). – P. 149 – 152.

Степаншин Ю.Г., Степаншина В.Н., Шемякин И.Г. Молекулярные

механизмы [illegible] и [illegible] к лекарственным препаратам // Антибиотики и химиотерапия. - 1999. - Т.44, N 4. - С. [illegible] - [illegible].

[illegible] В.В., [illegible] И.Ф., Дубинина [illegible] Е.А., Асланян Е.М., [illegible], [illegible] Физиологические свойства [illegible] штамма Bacillus thuringiensis - продуцента Lepidoptera [illegible] инсектицидных белков Bacillus thuringiensis // Биотехнология. - 1999. - N [illegible]. - С. [illegible] - 10.

Степанов А.В., Марынин Л.И., Воробьев А.А. Аэрозольная вакцинация против опасных инфекционных заболеваний // Вестник Росс. академии мед. наук. - 1999. - N 8. - С.47 - 54.

[illegible] В.В., Марынин Л.И., Померанцев А.П., Степанов А.В., [illegible], Уразов Н.В. Мониторинг возбудителей опасных инфекций [illegible] проблемы прогнозирования критических ситуаций // Вестник Росс. академии мед. наук. - 1999. - N 10. - С.3 - 8.

[illegible] В.И., Гусев В.В., Бородкина М.А., [illegible] Ю.П., Хатенин И.И., [illegible] Н.П. Ферменты, лизирующие золотистый стафилококк: получение и некоторые свойства лизостафина // Там же. - С. 22 - 24.

[illegible] Е.П., Фомченков В.М., Новиков И.А., Садомов В.Э., [illegible] М.В., Тремихова Т.А. Изучение взаимодействия фагов и микроорганизмов с использованием методов флюориметрии и электроориентационной спектроскопии // Там же. - С. 24 - 29.

Померанцев А.П., Павлов В.М. Плазмида pOSE4 для клонирования промоторсодержащих фрагментов ДНК в Francisella tularensis // Там же. - С. 29 - 32.

Тремихова Т.А., Волковой К.И., Шайхутдинова Р.З., Степанов А.В. Температурозависимые изменения иммунохимических свойств липополисахаридов // Там же. - С.32 - 34.

Герасимов В.Н., [illegible] Е.Б., Бабич И.В., Гаевская Г.Б., Круглов А.Н., Байдусь О.Ю., Степанов А.В. Физико-химические и антимикробные свойства хлорсодержащих композиций Шараф и ДП-1 // Там же. - С.35 - 41.

[illegible] Л.А., Гусев В.В., Попов Е.И. Биологическая и генетическая характеристика возбудителя колибактериоза телят // Ветеринария. - 1999. - N 5. - С.20 - 24.

Кузнецов А.В., Григоренко А.П., Кузнецова И.В., Андреева Л.Е., Дворянчиков Г.А., [illegible] Н.А. Перенос плазмидной ДНК при

оплодотворении яйцеклеток вьюна Misgurnus fossilis L. электропорированными сперматозоидами// Генетика. - 1999. - Т. 35, N 2. - С. 159 - 163.

Степаншин Ю.Г., Степаншина В.Н., Шемякин И.Г. Лекарственно-устойчивые штаммы Mycobacterium tuberculosis и их эпидемическая значимость// ЖМЭИ. - 1999. - N 3. - 84 - 89.

Гусев В.В., Мустафин И., Светоч Э.А. Кампилобактериозная инфекция бройлеров// Птицеводство. - 1999. - N 3. - С.18 - 20.

Воложанцев Н.В., Баннов В.А., Пачкунов Д.М., Померанцева О.М., Николаева О.Г., Говорунов И.Г. Конструирование генноинженерных дифтерийных токсоидов для разработки антидифтерийной вакцины нового поколения// VI Российский Национальный Конгресс "Человек и лекарство"(19-23 апреля 1999г., Москва). - Тезисы докладов.- 1999.- С.282.

Вострокнутова Г.Н., Мукамолова Г.В., Капрельянц А.С., Потапов В.Д., Игнатов С.Г., Бикетов С.Ф. Увеличение субпопуляции клеток M. tuberculosis, чувствительных к фактору RPF после внутриклеточного паразитирования в бактериофагах// Там же. - С.282.

Домотенко Л.В., Логачева Л.В., Морозова Т.П., Шепелин А.П. Новые питательные среды для диагностики дисбиотических состояний// Там же. - С.289.

Жиленкова Е.Л., Оборотов М.В., Игнатов С.Г., Бикетов С.Ф. Индукция и визуализация Croe-подобных белковых комплексов из лизированных бактериофагом клеток M. tuberculosis H37RV// Там же. - С.292 - 293.

Калачев И.Я., Ганина Е.А., Иванова О.А. Эффективность комбинированной вакцинохимиотерапии при лечении экспериментальной туляремийной инфекции// Там же. - С.298.

Прохоров В.А., Николаева О.Г., Иванова О.А., Мякинина В.П., Баранова Е.В. Дифференциальный анализ мембранных антигенов возбудителя дифтерии// Там же. - С.326 - 327.

Храмов М.В., Шепелин А.П., Савельева Г.М., Васильев М.М. Новый набор готовых питательных сред для диагностики гонореи, уреаплазмоза и трихомониаза// Там же. - С.341.

Шепелин А.П., Домотенко Л.В., Логачева Л.В., Мартовецкий М.Н., Шемякин И.Г., Булатова Р.Ф. Организация производства питательных сред для диагностики туберкулеза// Там же. - С.345.

Прохоров В.А., Ерусланов Б.В. Разработка латексных диагнос-

[illegible] для определения дифтерийного токсина [illegible] контроле уровня антитоксического иммунитета// Там же. - С. 461 - 462.

Игнатов С.Г. Биосенсор на основе [illegible] клеток для мониторинга токсинов в крови// Труды [illegible] Международной конференции "Новые информационные технологии в медицине и экологии". Украина, Крым, Ялта-Гурзуф. 31 мая - 10 июня 1999 г. - 1999. - С. 99 - [illegible].

Игнатов С.Г. Контроль быстрого метода определения комплемент-[illegible] бактерицидной активности сыворотки против грамотрицательных бактерий// Там же. - С. [illegible].

Игнатов С.Г., [illegible] С.Г. Контроль аминогликозидов в средах культивирования с помощью глюкозного биосенсора// Там же. - С. [illegible].

[illegible] Л.[illegible], Степанщина В.Н. Мониторинг штаммов M. tuberculosis, выделенных в России// Там же. - С. 138 - 139.

[illegible] В.И. Анализ и молекулярная динамика живых систем// "Структура и динамика молекулярных систем" Сборник тезисов. Казань-Москва-Йошкар-Ола. - 1999. - С. 42.

[illegible], Titareva G., Banteeva I., Pomerantsev A., [illegible] L.N., [illegible] A.N. Investigation of immunobiological effectivity of delivery of Brucella main outer membrane proteins of [illegible] and antrax toxin// The 2nd International Workshop on the Molecular Biology of Bacillus cereus, Bacillus anthracis and Bacillus thuringiensis (Taos, New Mexico, USA, August 11-13,1999). - P. 18.

Pomerantsev A. P., Marinin L.I., Staritsin N.A. Phenotipic variation of Bacillus anthracis as a result of A194-derivative plasmid integration into multiple sites of host genome// Там же. - P. [illegible].

Staritsin N.A., Marinin L.I., Shishkova N.A. Arbitration method in a solution of complicated problem of Bacillus taxonomy// Там же. - С. 29.

Tedikov V.M. Replication origins from resident plasmids of Bacillus thuringiensis as a source of DNA for development of new vectors for these microorganisms// Там же. - С. 57.

Говорунова Н.А., [illegible] Г.В., Маринин Л.И., Степанов А.В. Плотная питательная среда для выявления возбудителя сибирской язвы// Патент N 2125610. - 1999. - Бюл. изобретений N 3.

Хисамова Р.И., Носкова В.П., Расулова Г.Е., Холоденко В.П. Штамм [illegible] species ВКМ В-65-Б, используемый для очистки пресной и морской воды от нефти и нефтепродуктов// Патент N 2129603. - 1999. - Бюл. изобретений N12.

Ермоленко З.М., Холоденко В.П., Чугунов В.А. Штамм бактерий Rhodococcus species MPN, используемый для очистки воды и почвы от нефти и нефтепродуктов// Патент N 2133769. - 1999. - Бюл. изобретений N 21.

Ермоленко З.М., Холоденко В.П., Чугунов В.А. Штамм бактерий Pseudomonas alcaligenes E7, используемый для очистки воды и почвы от нефти и нефтепродуктов// Патент N 2134723. - 1999. - Бюл. изобретений N 23.

Ермоленко З.М., Холоденко В.П., Чугунов В.А., Кобелев В.С., Воробьева А.М. Штамм бактерий Pseudomonas putida 9, используемый для очистки воды и почвы от нефти и нефтепродуктов// Патент N 2134722. - 1999. - Бюл. изобретений N 23.

Ермоленко З.М., Холоденко В.П., Чугунов В.А., Кобелев В.С., Акимова Н.А. Штамм бактерий Pseudomonas alcanigenes, используемый для очистки воды и почвы от нефти и нефтепродуктов// Патент N 2133770. - 1999. - Бюл. изобретений N 21.

Ерусланов Б.В., Борзенков В.Н., Печерских Э.И., Светоч Э.А. Диагностикум для идентификации легионелл в клиническом материале и объектах внешней среды и способ его получения// Патент N 2129279. - 1999. - Бюл. изобретений N 11.

Храмов М.В., Шепелин А.П., Ажермачева Н.И., Савельева Г.М. Питательная среда для выделения возбудителя геморрагического колита с гемолитико-уремическим синдромом, вызываемого кишечной палочкой 0157:Н7 (Сорбитол E.coli 0157:H7)// Патент n 2139343. - 1999. - Бюл. изобретений N 28.

Добрица А.П. Рекомбинантная плазмидная ДНК PTV241, способ конструирования рекомбинантной плазмидной ДНКPTV241, способ конструирования плазмиды, содержащей CRY III A в составе транспозона TN917CAT, штамм бактерий Bacillus thuringiensis subsp. thuringiensis, активный против колорадского жука// Патент N 2125091. - 1999. - Бюл. изобретений N 2.

Мера укрепления доверия "D"

Форма "D"

АКТИВНОЕ СОДЕЙСТВИЕ КОНТАКТАМ

Планируемые на [illegible] год международные конференции, симпозиумы, семинары и другие аналогичные форумы

NN п/п	Название конференции, съезда, семинара, время и место проведения	Проводящие мероприятие организации, условия участия	Адрес, по которому следует обращаться
1	2	3	4
1.	Конференция "Современные аспекты охраны [illegible] микро-[illegible]" Апрель г. Москва	Департамент госсанэпиднадзора Минздрава России, по приглашению	[illegible] г. Москва, улица [illegible] дом [illegible]
2.	4-ый международный семинар-презентация научно-технических инновационных проектов "Биотехнология-2000" Сентябрь г. Пущино Московской обл.	Институт биохимии и физиологии микроорганизмов имени Г.К. Скрябина, по приглашению, представление биотехнологических инновационных проектов	142292 г. Пущино Московской обл. проспект Науки, дом 5
3.	Конференция "Новые направления биотехнологии на рубеже столетий" Май г. Москва	Научный совет РАН по проблемам биотехнологии, Центр "Биоинженерия" РАН, по приглашению	117312, г. Москва проспект 60-летия Октября, дом 7, корп. 1
4.	Конференция "Инфекции, обусловленные иерсиниями (иерсиниоз, псевдотуберкулез). Микробиология, эпидемиология, клиника, лабораторная диагностика" Май г. Санкт - Петербург	Департамент госсанэпиднадзора Минздрава России, НИИ эпидемиологии и микробиологии имени Пастера, по приглашению	197101, г. Санкт-Петербург, улица Мира, дом 14
5.	Конференция "Генная диагностика особо опасных инфекций" Ноябрь г. Саратов	Департамент госсанэпиднадзора Минздрава России, Российский противочумный НИИ "Микроб", по приглашению	410005, г. Саратов, улица Университетская, дом 46

Мера укрепления доверия "Е" **Форма Е**

Объявление законодательства, правил и других мер

Предмет	Законодательство	Правила	Другие меры	Поправки, внесенные с прошлого года
а) Разработка, производство, накопление запасов, приобретение или сохранение микробных или других биологических агентов или токсинов, боеприпасов, оборудования и средств доставки, оговоренных в статье I	Да	Да	Да	Нет
б) Экспорт микроорганизмов и токсинов х)	Да	Да	Да	Да
в) Импорт микроорганизмов и токсинов х)	Нет	Да	Да	Нет

х) Микроорганизмы, патогенные для человека, животных и растений, подпадающие под действие Конвенции.

Мера укрепления доверия "C"

Форма "C"

Объявление объектов по производству вакцин

Наименование объекта, почтовый адрес	Общее описание видов охватываемых болезней
1	2
Предприятие по производству бактерийных препаратов Московского научно-исследовательского института эпидемиологии и микробиологии им.Г.Н. Габричевского Минздрава РФ 103006, г. Москва, Успенский пер., д.10	Менингококковая вакцина
Иркутское предприятие по производству иммунобиологических препаратов Минздрава РФ 664009, г. Иркутск ул. Летняя, д. 1а	Гриппозная вакцина
Предприятие по производству бактерийных препаратов Санкт-Петербургского научно-исследовательского института эпидемиологии и микробиологии им. Л.Пастера Минздрава РФ 197101, г. Санкт - Петербург, ул. Мира, д. 14	Гриппозная вакцина
Предприятие по производству бактерийных препаратов Омского научно-исследовательского института природно-очаговых инфекций Минздрава РФ 644080, г. Омск пр. Мира, д. 7	Бруцеллезная вакцина Туляремийная вакцина
Иркутский научно-исследовательский противочумный институт Сибири и Дальнего Востока Минздрава РФ 664047, г. Иркутск, ул. Трилиссера, д.78	Холерная вакцина
Ставропольский научно-исследовательский противочумный институт Минздрава РФ 355106, г. Ставрополь, ул. Советская, д. 13/15	Чумная вакцина
Предприятие по производству биологических медицинских препаратов АО "Биомед" им. Мечникова Минздрава РФ 143422, Московская обл., Красногорский р-н, п/о Петрово - Дальнее	Вакцина коклюшно-дифтерийно-столбнячная (АКДС)

1	2
Федеральное государственное унитарное предприятие "Аллерген" Минздрава РФ 355105, г. Ставрополь, ул. Биологическая, д. 20	Вакцина противотуберкулезная (БЦЖ) сухая
Государственное Научно-производственное объединение "Биомед" Минздрава РФ 614089, г. Пермь, ул. Братская, д. 177	Вакцина брюшно-тифозная Вакцина против Ку-лихорадки
Государственное унитарное предприятие "НПО Вирион" Минздрава РФ 634040, г. Томск, ул. Ивановского, д.8	Вакцина против клещевого энцефалита культуральная жидкая
Государственное унитарное предприятие "НПО Иммунопрепарат" Минздрава РФ 450024, г. Уфа, ул. Новороссийская, д.105	Вакцина коклюшно-дифтерийно-столбнячная жидкая (АКДС)
Экспериментально-производственное предприятие по производству бактерийных и вирусных препаратов Института полиомиелита и вирусных энцефалитов им. М.Б. Чумакова РАМН 142782, Московская обл., Ленинский район, п/о Института полиомиелита (27 км Киевского шоссе)	Вакцина полиомиелитная Вакцина антирабическая Вакцина против клещевого энцефалита
Научно-исследовательский институт микробиологии Минобороны РФ 610024, г. Киров, Октябрьский пр., д.119	Вакцины чумная и сибиреязвенная
Государственный научный центр вирусологии и биотехнологии "Вектор" Минздрава РФ 633159, Новосибирская обл., Новосибирский район, пгт Кольцово	Вакцины против гепатита А, кори, клещевого энцефалита
Государственное предприятие по производству бакпрепаратов НИИЭМ им. Н.Ф. Гамалеи РАМН 123098, г. Москва, ул. Н.Ф.Гамалеи, д.18	Вакцина противотуберкулезная сухая БЦЖ Вакцина "Имурон" для иммунотерапии в онкологии (сухая)

SAN MARINO

17 April 2000

Please, find, hereafter, the "Nihil Report" of the Republic of San Marino in observance of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

The Permanent Mission of the Republic of San Marino to the United Nations presents its compliments to the Department for Disarmament Affairs of the United Nations and has the honor to inform it of the following declaration by the Government of the Republic of San Marino.

"In observance of the decision adopted during the Third Conference for the implementation of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, San Marino has the honor to inform the Department for Disarmament Affairs that on its territory there is no presence of such weapons."

SLOVAKIA

20 April 2000

The Permanent Mission of the Slovak Republic to the United Nations presents its compliments to the Under-Secretary-General for Disarmament Affairs and has the honour to transmit herewith to him a declaration of the Slovak Republic in pursuance with the agreement reached at the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

At the Third Review Conference it was agreed that all States Parties present the following declaration

1 Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

MEASURE	Nothing to declare	Nothing new to declare
A, part 1	✓	
A, part 2 (i)	✓	
A, part 2 (ii)	✓	
A, part 2 (iii)	✓	
B (i)	Declaration enclosed	
B (ii)	✓	
C	✓	
D	Declaration enclosed	
E	✓	
F	✓	
G		✓

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 15. April 2000

State Party to the Convention: Slovak Republic

Biological Weapons Convention

From B (i)

Background Information on Outbreaks of
Reportable Infectious Diseases in Slovak republic

A) Human diseases Number of cases per year

Incidence of infectious diseases in absolute numbers per year in Slovak republic

statist. code	Diseases	1993	1994	1995	1996	1997	1998	1999
A 01	Typhoid fever	2	6	2	3	1	1	0
A 02	Salmonella infections	17 481	17 239	17 717	15 855	18 345	21 471	18 915
A 03	Shigella infections	3 139	3 664	1 899	968	1 598	1 075	1 150
A 05	Enterotoxicosis	553	336	463	552	249	308	186
A 06	Amoebiasis	2			1	1		1
A 07	Intest. Parasitic dis.	1 566			795	701	360	233
A 04,09	Diarrhoeal diseases	4 477	5 014	4 806	5 109	4 814	5 662	4 893
A15	Tuberculosis	1 797	1 760	1 537	1 561	1 305	1 289	1211
A 21	Tularemia	17	24	152	74	28	34	37
A 28	Bact. Zoonosis	29					2	2
A 37	Pertussis	702	56	10	135	109	9	153
A 38	Scarlatina	1 732	1 538	1 363	894	1 036	1 034	634
A 46	Erysipelas	1 035			761	869	888	900
A 39	Meningococcal infect.	20	16	34	90	132	86	74
A 33,34,35	Tetanus	1	1	1	1	0	0	0
A 42	Actinomycosis	6			7	1	7	0
A 81	Slow virusis	1	6	3	4	2	4	4
A 87	Viral meningitis	84	103	91	138	116	114	109
A 86,88	Viral meningoencephalitis	26	54	20	23	9	19	29
A 84	Viral encephalitis	51	60	89	102	78	54	63
B 01	Varicella (Smallpox)	34 444	28 334	24 453	22 769	28 040	24 249	18 190

statist. code	Diseases	1993	1994	1995	1996	1997	1998	1999
B 02	Herpes zoster	3 439	3 249	3 076	3 043	2 921	3 149	2 743
B 00	Herpes simplex	389			562	545	528	425
B 05	Morbilli (Measles)	551	29	2	0	620	530	0
B 06	Rubella	79	67	1 004	221	75	37	66
B 15	Hepatitis A	2 112	277	1 346	1 011	1 207	676	62
B 16	Hepatitis B	426	380	338	300	260	202	208
B 17	Hepatitis C	33	157	132	45	57	46	56
B 19	Hepatitis (NEC)	187	113	63	122	101	86	75
B 26	Parotitis epidemica	281	136	189	256	343	160	44
B27	Mononucleosis infec.	715	952	1 074	1 010	957	962	910
B 30	Conjunctivitis virosa	484			1	1	9	0
A 78	Q fever	127			4	1	0	0
B 50	Malaria	3	4	5	2	2	2	2
B 58	Toxoplasmosis	288	412	504	566	685	418	451
A69.2 M01.2, G63	Morbus Lyme	740	506	602	897	777	605	600
A 27	Leptospirosis	26	36	42	26	33	26	26
B 86	Scabies	6 290	8 346	6 967	5 291	4 167	4 133	3 395
B 67-82	Helminthosis	2 970	33	24	2 958	2 231	1 626	1 189
B 35,37	Mycoses	230	149	163	201	206	156	
A 50-53	Syphilis	58		26	154	191	171	279
A 54	Gonorrhea	1 347	37	34	224	199	136	108
B 20- 21 B24	AIDS	3	9	11	11	19	22	21
	HIV posit.	38	38	46	50		99	71

From D

Active Promotion of Contacts

Information about microbiological conferences in 2000

1. Symposium of Microbiological and Epidemiological Society, High Tatras, September 2000
2. Moravien – West Slovakian Microbiological Days, Brno, June 2000
3. „AIDS", Symposium with international participancy, Častá Papiernička, June 2000
4. Regional conference, Košice, November 2000

SLOVENIA

22 May 2000

The Permanent Mission of the Republic of Slovenia to the United Nations presents its compliments to the Secretary-General of the the United Nations and has the honour, as required in the Final Document of the Third Review Conference of the Parties to the Biological and Toxin Weapons Convention, to forward the copy of the Background information on outbreaks of reportable infection, prepared by the Ministry of Health of the Republic of Slovenia.

Form B (1)

Background information on outbreaks of reportable infection diseases

Disease	Number of cases per year		
	1997	1998	1999
Foodborne disease outbreaks by causative agents:			
Salmonella enteritidis	88	145	124
Cryptosporidium	–	–	–
Hepatitis A virus	14	–	–
Trichinella	–	–	–
Yersinia enterocolitica	–	–	–
Enterovirus	–	36	–
Staph. Aureus	–	32	8
Unknown	175	636	242
Waterborne disease outbreaks – all	184	202	40
Unknown causative agents			
Other disease outbreaks by Causative agents:			
Strept. Group A	346	95	55
Echovirus	184	–	–
Rotavirus	33	4	–
Sarcoptes scabiei	8	–	–
Unknown	189	251	248
Microsporum comis			23
Hepatitis A			16
Legionella sp.			2
Humani parvovirus tip 19			6
Bacillus cireus			68
Salmonella typhimurium			22
Clostridium botulinum			2

SOUTH AFRICA

8 June 2000

The Permanent Mission of South Africa to the United Nations presents its compliments to the Secretary-General of the United Nations and has the honour to present information and data in conformity with the standardized procedure as recommended by the Third Review Conference of the Parties to the Convention on the Prohibition of the Development. Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (resolution 46/35A).

The 1999 declaration on information and data was compiled and approved by the South African Council for the Non-Proliferation of Weapons of Mass Destruction based on individual declarations by the South African National Defence Force and the South African biotechnology industry.

CONFIDENCE BUILDING MEASURES

REPUBLIC OF SOUTH AFRICA

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE FOR USE IN THE INFORMATION EXCHANGE

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE
A, PART 1	☐	☑
A, PART 2 (I)	☐	☐
A, PART 2 (I)	☐	☐
A, PART 2 (iii)	☐	☐
B. (I)	☐	☐
B. (ii)	☐	☐
C	☐	☑
D	☐	☑
E	☐	☑
F	☐	☑
G	☐	☑

DATE 2000
STATE PARTY TO THE CONVENTION : REPUBLIC OF SOUTH AFRICA

CONFIDENCE BUILDING MEASURE "A"

FORM A PART 1

EXCHANGE OF DATA ON RESEARCH CENTRES AND LABORATORIES

Nothing new to declare

→

CONFIDENCE BUILDING MEASURE "A"

FORM A, PART 2 (i)

NATIONAL BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAMME DECLARATION

South Africa has no Biological Defence Programme. The only activities conducted in biological defence were literature studies on specific aspects related to Biological defence. No laboratory work in any field has been conducted.

CONFIDENCE BUILDING MEASURE "A"

FORM A PART 2 (ii)

NATIONAL BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAMME DECLARATION

Objective of activities.

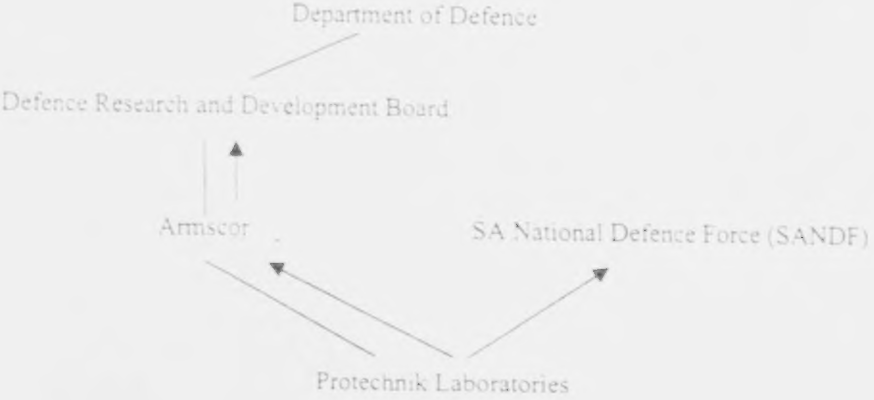
The objective of activities in biological defence is to bring and keep key personnel up to date on international developments in biological defence by conducting literature studies on specific topics. During 1999 literature studies were conducted on "Current trends in the thread of Biological Warfare"(which included terrorist threats) and "Protection Requirements against Biological Warfare agents"

Total funding of the activities and the source of the funding

The total funding of the activities was in the order of $35 000.00 and the source was the Department of Defence. The funding of these activities form part of the funding for the Chemical Defence Programme and are conducted at the chemical defence facility

One person at the institute belonging to the Department of Defence conducted all the activities.

Diagram of Organisational structure


Department of Defence
Defence Research and Development Board
Armscor
SA National Defence Force (SANDF)
Protechnik Laboratories

Lines indicate contracting relationships
Arrows indicate reporting relation ships

The reports of the literature studies are sent to the SANDF and specifically to the Chemical and biological Defence Advisor to the Surgeon General who distributes them to other relevant personnel for study.

FORM A, PART 2 (iii)

NATIONAL BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAMME DECLARATION.

FACILITIES.

Name of the Facility where activities are conducted

Protechnik Laboratories

Address and Location

103 Combretum crescent
Highveld Technopark
Centurion

Located approximately 10 km South east of Pretoria.

One person conducted all the declared activities in the library of the facility and his office. There are no rooms or laboratories or any other personnel utilised for biological defence work.

CONFIDENCE BUILDING MEASURE "B"

FORM B (i)

BACKGROUND INFORMATION ON OUTBREAKS OF REPORTABLE INFECTIOUS DISEASES

Note: The data for 1998 contained in the 1999 CBM Declaration were not complete as stated in that Declaration. The updated data for 1998 is supplied in this Declaration. The data for 1999 were not finalised at the time of completing this declaration; the updated data will be supplied in the 2001 Declaration.

	NUMBER OF CASES PER YEAR					
DISEASE	1994	1995	1996	1997	1998	1999
Anthrax	0	3	2	4	0	0
Brucellosis	20	6	15	5	1	1
Cholera	5	0	0	3	22	2
Congenital Syphilis	913	862	654	482	182	70
Crimean Congo Haemorrhagic Fever	4	1	19	1	4	4
Diphtheria	1	6	0	2	4	0
Food Poisoning	207	323	188	46	252	243
Legionellosis	4	0	0	4	0	3
Leprosy	89	49	13	34	43	12
Malaria	10 288	4 784	29172	23168	26445	51433
Measles	3 819	5 071	10534	1130	1074	385
Meningococcal Infection	362	348	448	350	268	121
Paratyphoid Fever	7	6	0	0	2	0
Plague	0	0	0	0	0	0
Poisoning Agricultural Stock Remedies	166	115	117	97	109	81
Poliomyelitis	0	0	0	0	0	0
Rabies	7	5	8	6	7	9
Rheumatic Fever	30	20	48	34	49	10
Tetanus	33	23	31	32	10	4

DISEASE	1994	1995	1996	1997	1998	1999
Tetanus Neonatorum	15	3	7	5	6	2
Trachoma	62	61	26	11	56	1
Tuberculosis						
Primary	7 222	6 191	6 130	5 342	8 866	4 224
Pulmonary	79 532	65478	68730	59966	76310	27555
Other Respiratory Organs	1 935	1 479	1680	1078	1955	846
Meninges	396	307	331	318	477	216
Intestines	84	101	79	70	104	56
Bones & Joints	139	110	121	143	200	82
Genito-urinary System	84	55	62	42	59	34
Other Organs	767	707	659	1067	1142	418
Miliary	242	222	275	277	474	205
Tuberculosis Total	90 401	74650	78067	68303	89587	33636
Typhoid Fever	1 118	653	643	536	450	71
Typhus Fever (Lice Borne)	0	1	1	0	0	0
Typhus Fever (Rat flea Borne)	0	1	2	0	0	0
Viral Hepatitis A	888	730	1202	695	825	452
Viral Hepatitis B	481	434	475	316	566	136
Viral Hepatitis Non A Non B	59	21	16	17	14	3
Viral Hepatitis Unspecified	232	119	159	97	148	58
Viral Hepatitis Total	1 660	1 304	1852	1115	1553	649
Whooping Cough	64	51	26	14	44	34

There were no outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern during 1999.

CONFIDENCE BUILDING MEASURE "C"

ENCOURAGEMENT OF PUBLICATION OF RESULTS AND PROMOTION OF USE OF KNOWLEDGE

Scientists in SA are in no way restricted to publish the results of their work in scientific journals as long as it does not affect national and commercial interests.

CONFIDENCE BUILDING MEASURE "D"

ACTIVE PROMOTION OF CONTACTS

South Africa does not plan any activities under this measure.

CONFIDENCE BUILDING MEASURE "E"

FORM E

DECLARATION OF LEGISLATION, REGULATIONS AND OTHER MEASURES

Nothing new to declare.

CONFIDENCE BUILDING MEASURE " F"

DECLARATION OF PAST ACTIVITIES IN OFFENSIVE AND/OR DEFENSIVE RESEARCH AND DEVELOPMENT PROGRAMMES

1. Date of entry into force of the convention for the State Party.

   Signed: 10 April 1972.

   Ratified: 3 November 1975.

2. Past offensive biological research and development programmes:

   Nothing new to declare

SPAIN

24 May 2000

La Misión Permanente de España ante las Naciones Unidas saluda atentamente al Departamento de Asuntos de Desarme y tiene el honor de remitir la información referente a Medidas de Confianza en materia de Armas biológicas, establecidas por la Segunda Conferencia de Revisión de la Convención de Prohibición de Armas Biológicas y reafirmadas por la Tercera Conferencia de Revisión.

REINO DE ESPAÑA

ANEJO DE LA DECLARACION FINAL SOBRE MEDIDAS DE FOMENTO DE LA CONFIANZA

En la Tercera Conferencia de Examen se convino en que todos los Estados Partes presentaran la siguiente declaración:

1. Formulario de declaración sobre "nada que declarar" o "nada nuevo que declarar"

Medida	nada que declarar	nada nuevo que declarar
A. Parte 1	-	X
A. Parte 2 i)	-	X
A. Parte 2 ii)	-	X
A. Parte 2 iii)	-	X
B. i)	-	-
B. ii)	X	X
C	X	X
D	-	-
E	X	-
F	X	X
G	-	-

Marquesé el o los casilleros apropiados con respecto a cada medida

Fecha: Abril de 2000

Estado Parte en la Convención: REINO DE ESPAÑA

FORMULARIO A. PARTE I

Intercambio sobre datos sobre centros y laboratorios de investigación[1]

1 **Nombre de la instalación** ***Centro de Investigación en Sanidad Animal (CISA)***

2 **Organización o empresa pública o privada responsable:**

Dirección General de Investigación y Tecnología Agraria y Alimentaria del Ministerio de Agricultura, Pesca y Alimentación.

3 **Ubicación y dirección postal:**
Ubicado en una finca de 34 hectáreas en Valdeolmos.
Carretera de Algete a El Casar de Talamanca s/n. 28130 VALDEOLMOS (Madrid)

4 **Fuente(s) de financiación de la actividad, con indicación de si está total o parcialmente financiada por el Ministerio de Defensa.**

INIA, proyectos I+D del Plan Sectorial del MAPA, proyectos del Plan Nacional y de la Unión Europea, además de convenios de colaboración con empresas.

5 **Número de unidades de contención máxima[2] que hay en el laboratorio y/o centro de investigación con indicación de su tamaño respectivo (m2).**

El CISA dispone de 10.824 m2 de nivel 3 de contención (según RD 664/97), en los que se incluyen laboratorios, animalario para grandes especies y zonas auxiliares, además de las plantas técnicas y el área de tratamiento de residuos.

6 **Si no existe ninguna unidad de contención máxima, indíquese el nivel más elevado de protección**

No es aplicable.

7 **Alcance y descripción general de las actividades con indicación del tipo o de los tipos de microorganismos y/o toxinas según proceda.**

Desarrollo de métodos de diagnóstico basados en ténicas moleculares para el diagnóstico de enfermedades infecciosas de importancia económica (fiebre aftosa, enfermedad vesicular porcina, peste porcina africana, peste porcina clásica, peste de los pequeños rumiantes, síndrome respiratorio o reproductivo porcino, circovirus...)

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[1] [illegible]

[2] [illegible]

[3] [illegible]

Nuevas estrategias para el diagnóstico práctico y control de las encefalopatias espongiformes transmisibles (TSE) y desarrollo de modelos experimentales biológicos.

Nueva aproximación al diagnóstico de peste porcina africana, patogénesis y protección. Caracterización molecular de los aislados.

Desarrollo de nuevos métodos de diagnóstico para su aplicación en el control sanitario de explotaciones ganaderas.

Caracterización molecular y antigénica de los virus de las enfermedades vesiculares del cerdo.

Desarrollo de vacunas DNA en acuicultura modelo trucha /VHSV.

Respuesta inmune frente al virus de la fiebre aftosa. Desarrollo de vacunas y de sus mecanismos de acción.

Estudio de la interacción virus-huésped en enterovirus porcinos. Identificación de receptores virales. Aplicación de nuevas tecnologias para el desarrollo de vacunas contra la enfermedad vesicular porcina.

FROMULARIO A. PARTE I (continuación)

1 **Nombre de la instalacion**

Laboratorio Biologico del Departamento de Defensa NBQ de la Fábrica Nacional de La Marañosa.

2 **Organización o empresa pública o privada responsable:**

Subdireccion General de Tecnología y Centros. Direccion General de Armamento y Material. Ministerio de Defensa

3 **Ubicación y dirección postal**

Fabrica Nacional La Marañosa. Cra. San Martin de la Vega, Km. 10,5
28330 San Martin de la Vega. MADRID

4 **Fuente(s) de financiación de la actividad, con indicación de si está total o parcialmente financiada por el Ministerio de Defensa**

- Financiacion parcial por parte del Ministerio de Defensa (I+D)
Programa COINCIDENTE
- Financiacion parcial Programas PETRI Y ATYCA-

5 **Numero de unidades de contención maxima que hay en el laboratorio y/o centro de investigación con indicación de su tamaño respectivo (m2)**

NINGUNO

6 **Si no existe ninguna unidad de contención máxima, indiquesé el nivel más elevado de protección.**

NIVEL 2

7 **Alcance y descripción general de las actividades con indicación del tipo o de los tipos de microorganismos y/o toxinas según proceda.**

Ensayos de descontaminacion mediante encimas bacterianas
Ensayos de degradación mediante bacterias
Ensayos de evaluacion de riesgo en cultivos celulares, microalgas y microcrustaceos
Pruebas diagnosticas aerológicas y de amplificación genómica

Para todas las actividades se cumple que el trabajo se desarrolla con organismos de nivel 1 o 2, con organismos no viables o atenuados o con acidos nucleicos.

FORMULARIO A PARTE 1 (continuación)

1. **Nombre de la instalación:**

Laboratorio de Sanidad y Producción Animal del Estado

2. **Organización o empresa publica o privada responsable:**

Ministerio de Agricultura, Pesca y Alimentación

3. **Ubicación y dirección postal:**

Camino del Jau S/N 18320 Santa Fe (Granada) España.

4. **Fuente(s) de financiacion de la actividad, con indicación de si está total o parcialmente financiada por el Ministerio de Defensa.**

   Ministerio de Agricultura, Pesca y Alimentación

5. **Número de unidades de contención máxima que hay en el laboratorio y/o centro de investigación con indicación de su tamaño respectivo (m2).**

Existen 500 m2 de laboratorio de nivel de contención tipo III. No existe el nivel IV

6. **Si no existe unidad de contención máxima, indiquesé el nivel más elevado de protección.**

   Tipo III

7. **Alcance y descripción general de las actividades con indicación del tipo o de los tipos de microorganismos y/o toxinas según proceda.**

   - Brucella s.p.p.
   - Mycobacterium s.p.p.
   - Virus rábico atenuado c.v.s.

FORMULARIO PARTE A, PARTE 2 i)

Declaración sobre el programa nacional de investigación y desarrollo para la defensa biológicas

¿Existe un programa nacional de investigación y desarrollo en materia de defensa biológica en el territorio del Estado Parte o en cualquier parte bajo su jurisdicción o control? Las actividades de semejante programa comprenderán: profilaxis, estudios de patogenecidad y virulencia, técnicas de diagnóstico, aerobiología, detección, tratamiento, toxicología, protección física, descontaminación y otras investigaciones conexas.

Sí, existe tal programa.
Sí, las actividades del programa incluirán muchas de las expresadas en el párrafo cuando la financiación permita su desarrollo a pleno rendimiento.

Si la respuesta es afirmativa, llénese la parte 2 (ii) del formulario A, en la que se pide una descripción del programa.

FORMULARIO A: PARTE 2.ii)

Programa nacional de investigación y desarrollo en materia de defensa biológica.

Descripción

1. **Señale los objetivos y los recursos financieros de que dispone el programa y resuma las principales actividades de investigación y desarrollo del programa. Se abordarán las siguientes esferas: profilaxis, estudios de patogenecidad y virulencia, técnicas de diagnóstico, aerobiología, detección, tratamiento, toxicología, protección, protección física, descontaminación y otras investigaciones.**

a) DESCONTAMINACION: Descontaminación enzimática de agentes químicos

Objetivos: Aislamiento de microorganismos con capacidades enzimáticas interesantes capaz de neutralizar o destruir los efectos tóxicos de agresivos químicos, fundamentalmente organofosforados y vesicantes, aislamiento de las enzimas que realizan estos procesos, su estudio para evaluar su utilización en fórmulas descontaminantes que puedan ser utilizadas sobre los equipos modernos (electrónicos, ópticos, etc.), personas y que puedan ser utilizados en los ejercicios sin dañar el entorno y con propiedades de almacenamiento fácil y preparación directa en el campo y que se puedan usar con los equipos actuales.

Financiación: En 1999, 3 Millones/Pts

b) TECNICAS DE DIAGNOSTICO Y PROFILAXIS: diagnóstico de agentes biológicos y estudios de inmunogenicidad

Objetivos: Desarrollo de sistemas rápidos de detección de agresivos biológicos y estudio inmunológicos y molecular aplicados al desarrollo de estrategias de diseño de vacunas de nueva generación para algunos de los agresivos estudiados (al menos ántrax).

Financiación en 1999: 13 millones/Pts

c) BIODEGRADACION: Degradación biológica del TNT

Objetivos: Eliminación de explosivos (TNT) en medios acuosos contaminados por éstos, mediante sistemas biológicos que no afecten al medio ambiente y que sean capaces de biodegradar dichas sustancias.

Financiación: en 1999, 3,7 Millones/Pts

d) EVALUACION DE RIESGO AMBIENTAL: Utilización de cepas microalgales para la evaluación de toxicidad de compuestos y la detección de agentes químicos.

Objetivos: Puesta a punto de técnicas basadas en tests biológicos que permitan detectar agresivos de alto riesgo de forma genérica en el menor tiempo posible.

Financiación directa: En 1999, 3,6 Millones/Pts
Ayudas a Centros de Investigación y empresas: 16,3 Millones/Pts

2 **Volumen total de recursos de que dispone el programa, y sus fuentes:**

38.6 M pts. procedentes de

- I+D MINISDEF
- Programa COINCIDENTE
- Programa ATYCA
- Programa PETRI

3 **¿Algunas partes se realizan de este programa, se realizan por contrato con la industria, instituciones académicas o en otras instalaciones no relacionadas con la defensa?.**

SI

4 **En caso afirmativo, ¿qué porcentaje del volumen total de recursos financieros del programa se destina a esos contratos u otras instalaciones?.**

Aproximadamente un 90%

5 **Resuma objetivos y esferas a las que se dedican los contratistas.**

- Desarrollo de técnicas de interés para el programa.
- Transferencia de tecnología al MINISDEF
- Suministro de materiales biológicos necesarios para la transferencia de tecnología.

6 **Adjunte organigrama del programa y sus vínculos en materia de presentación de informes (indique cada una de las instalaciones que participan en el programa):**

Los Organismos y Empresas comprometidos en el programa biológico son los siguientes:

- FABRICA NACIONAL DE LA MARAÑOSA. Perteneciente a la Subdirección General de Tecnología y Centros de la dirección General de Armamento y Material (SGTECEN/DGAM) del Ministerio de Defensa. Participación del Departamento NBQ.

- CENTRO DE INVESTIGACION EN SANIDAD ANIMAL (CISA). Perteneciente al Instituto Nacional de Investigaciones Agrarias (INIA) del Ministerio de Agricultura, Pesca y Alimentación. Participación asimismo del Laboratorio de Toxicología Ambiental, dependiente de CISA.

- FACULTAD DE VETERINARIA. Perteneciente a la Universidad Complutense de Madrid, del Ministerio de Educación y Cultura. Participación de:

- Departamento de Bioquímica Molecular IV
- Departamento de Genética

- LABORATORIOS HIPRA, S.A. Amor (Gerona). Participación del Departamento de I+D.
- Laboratorio de análisis y ensayos ADIRONDACK, S.A.

7. **Declaración 2 iii para cada instalación externa.**

FORMULARIO B [illegible]

Antecedentes sobre brotes de enfermedades infecciosas de las que se puede informar

ENFERMEDAD	1991	1992	1993	1994	1995	1996	1997*	1998*	1999*
Aftas	-		-	-		-	-	-	
Amigdalitis		-		1			-		-
Aspergilosis invasiva	-		-		1	1		-	-
Botulismo	2	8	5	5	5	5	7	8	6
Brucelosis	19	16	13	37	42	27	35	20	7
Carbunco	1	1	1	3	-	-	1	-	-
Cólera	-	1	-	1	-	-	-	-	-
Conjuntivitis	3	2	2	4	2	3	1	3	1
Dermatitis	-		-	-	3	1	-		-
Dermatomicosis	-	1	3	2	3	-	-	1	2
Disentería	10	11	2	11	7	5	6	6	
Erisipela		-	-	1		-	-	-	-
Eritema	1	1	2	-	2	-	-	-	-
Escabiosis	1	4	4	2	8	7	34	29	9
Escarlatina	-	1	1	-	1	5	1	7	2
Exantema vírico	1	1		1		-	1	-	1
Faringitis	-		-	-	1		-		-
Faringoamigdalitis	-		-	1	2	-	-		-
F. exantemática	2	1	-	1	1		-		
F. tifoides	3	6	2	5	3	7	4	2	-
Fiebre Q	1	1		4		1	-	-	-
Giardiasis	1	1	2		-				
Gripe	2		2	-	3	1	-	7	3
Hepatitis	58	30	21	30	41	44	55	56	11
Herpes virus	1	-		-		-	-		-
Hidatidosis	-	-		-		-	4		
Infección Respiratoria Aguda	3		1	-	2	2	1	3	-

Formulario II r) (continuación)

ENFERMEDAD	1991	1992	1993	1994	1995	1996	1997*	1998*	1999*
I. Alimentaria	955	999	985	997	909	879	858	931	300
I. Intestinal	32	38	28	35	94	85	101	144	51
I. Meningocócica	15	12	11	7	9	15	7	2	2
Legionelosis	5	5	9	8	1	4	10	10	5
Lepra	-	-	-	-	1		-	-	-
Listeria	-	-	1	-	-	-	1		-
Meningitis Linfocitaria	1	17	5	-	8	3	16	4	-
Molusco contagioso	-	-	-	-	1		-		-
Mononucleosis	1	1	3	2	1	1	1	2	-
Neumonia	2	5	1	2	2	2	13	16	1
Otitis	-	1	1	-	-	-	-	-	-
Parasitosis	-	-	-	-	1	1	2	-	-
Parotiditis	6	2	1	-	17	72	123	17	13
Pediculosis	3	1	1	1	-	-	4	8	1
Psitacosis	-	-	2	2	-	1	-	-	-
Pleurodinia	-	1	-	-	-	-	-	-	-
Queratoconjuntivitis	-	-	-	-	1	3	-	-	-
Rubeola	9	1	2	1	2	41	27	8	1
Sarampion	27	59	17	10	77	52	23	3	1
Sifilis	-	-	-		1	-	-	-	-
Sepsis puerperal	1	-	-	-	-	-	-	-	-
Tiña	1	-	1	2	3	-		-	-
Tos ferina	1	4	2	2	1	6	12	3	3
[illegible]	8	6	5	4	6	3	2	6	4
Tuberculosis	29	21	15	13	18	32	85	54	12
Tularemia	-	-	-	-	-	-	1	1	-
Varicela	2	4	2	2	3	5	11	6	5

* Datos provisionales a 20/01/2000

5

FORMULARIO D)

Promoción activa de los contactos

1 Conferencias, simposios y seminarios internacionales previstos y demas foros análogos de intercambio

FOROS PREVISTOS PARA EL AÑO 2000-05-10

EUCLID-CEPA 13 (European Cooperation Long Term in Defence-Common European Priority Area 13

NATO BioMedAc (Biomedical Advisoty Comitee)

NATO SIBCA (Sampling and Identification of Biological and Chemical Agents)

Lugar y fecha Por determinar

2 Información relativa a otras oportunidades

- Congreso Nacional de Toxicología
- Docencia en Centros Militares de Enseñanza

* * *

FORMULARIO E

Declaración de legislación, reglamentos y otras medidas

ASUNTO	LEYES	REGLAMENTOS	OTRAS MEDIDAS	INTROUCCION DE ENMIENDAS DESDE EL AÑO PASADO
A) Desarrollo, producción, adquisición o retención de agentes microbianos u otros agentes biológicos de las toxinas, armas, el equipo y los vectores especificados en el artículo I	-	-	-	-
B) Exportación de microorganismos* y toxinas	-	-	-	-
C) Importación de microorganismos* y toxinas	-	-	-	-

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* Microorganismos patogénicos para el hombre, los animales y las plantas, de conformidad con la Convención.

FORMULARIO G

Declaración de instalaciones de producción de vacunas

I 1. Nombre de la instalación:
ALCALA FARMA, S.A.

2. Ubicación: Administración y Fábrica
Carretera M-300, Km. 29,920
Alcalá de Henares 28802 Madrid

3. Tipos de enfermedades que se combaten:
Vacuna [illegible]
Vacuna [illegible]

II 1. Nombre de la instalación:
CBF LETI, S.A.

2. Ubicación (dirección postal): C/ del Sol, 5 (Polígono Industrial Norte)
28760 Tres Cantos (Madrid)

3. Descripción General de los tipos de enfermedades que se combaten:

Vacuna Antigripal
Vacuna Antitetánica
Vacuna Antidiftérica
Vacuna Antipertussis
Vacuna triple (Tétanos, Difteria, Tosferina)
Vacuna polivalente
Vacunas individuales de alergia (a pólen, alimentos, ácaros)
Gamma globulina normal

III 1. Nombre de la instalación:
IBIS (GRUPO PHARMACIA)

2. Ubicación (dirección postal): C/ Albacete, 5
28027 Madrid

3. Descripción General de los tipos de enfermedades que se combaten:

Triplevírica

IV 1. Nombre de la instalación:
NEZEL, S.A.

2. Ubicación (dirección postal): Av. Diagonal, 507
08029 Barcelona

3. Descripción General de los tipos de enfermedades que se combaten:

Antigripal
Anticatarral

V. 1. Nombre de la instalación:
SANOPHI WINTHROP, S.A.

2. Ubicación: Administración y Fabricación:
Avda. Litoral del Mar, 12-14
08005 BARCELONA

3. Tipos de enfermedades que se combaten:
Antigripal
Anticatarral

VI. 1. Nombre de la Instalación:
SOLVAY PHARMA, S.A. (que entre otras incluye a la empresa NEZEL)

1. Ubicación:
Administración:
Avda. Diagonal, 507-509
08029 Barcelona
Fábrica:
C/Ramón y Cajal, 2
Parets del Vallés, Barcelona.

2. Tipos de enfermedades que se combaten

Antigripal
Anticatarral.

VI. 1. Nombre de la instalación:
SANOPHI PHARMA, S.A.

2. Ubicación (dirección postal): C/ Beethoven, 9
08021 Barcelona

3. Descripción general de los tipos de enfermedades que se combaten.

Antigripal.

VIII 1. Nombre de la instalación:
SMITH KLINE BEECHAN, S.A.

2. Ubicación (dirección postal):
Administración: Valle de la Fuenfría, 3
28034 Madrid
Fábrica:
Polígono Ind. Santa María de Benquerencia.
45007 Toledo.

3. Descripcion general de los tipos de enfermedades que se combaten:

Vacuna Antihepatitis A y B
Vacuna Antirubeola
Vacuna Antivaricela
Vacuna hemofilia B
Vacuna antitetanos y difteria y antitosferina.
Vacuna Antipolio

IX. 1. Nombre de la instalación:
MERCK SHARP & DOME, S.A.
(Desde enero de 1997, la fabricacion de sus productos se la realiza la empresa ABELLO FARMACIA)

2. Ubicación: Cra. de Barcelona, Km 32,600
Alcala de Henares (Madrid)

Administracion: C/Josefa Valcarcel, 38
28027 Madrid

3. Tipos de enfermedades que se combaten:

Vacuna Antiparotiditis
Vacuna triple
Vacuna Antihepatitis
Vacuna difteria/tetanos
Vacuna atialergica
Vacuna rabica

X. 1. Nombre de la instalación:
PEN, S.A. (Empresa comercializadora de Esteve,S.A.)

2. Ubicación: Administración
Avda. Mare Deu Montserrat, 215
08026 Barcelona
Fábrica
San Adrian, 56
Barcelona

3. Tipos de enfermedades que se combaten:

Anticatarral

XI. 1. Nombre de la instalación: **ORGANON ESPAÑOLA, S.A.**

2. Ubicación: C/ Castello, 1
S. Boi de Llobregat
Barcelona

3. Tipos de enfermedades que se combaten:

Anticatarral

XII 1. Nombre de la instalación **CISA-INIA** (Centro de Alta Seguridad Biológica)

2. Ubicación VALDEOLMOS 28130-MADRID

3 Descripción general de tipos de enfermedades que se combaten
Enfermedades relacionadas con agresivos biológicos

SWEDEN

17 April 2000

The Permanent Mission of Sweden to the United Nations presents its compliments to the Department for Disarmament Affairs at the United Nations and, with reference to the Final Document of the Third Review Conference (1991) on BTWC, has the honour to submit the attached information. The information covers 1999.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2(i)	☐	☒
A, part 2(ii)	☐	☒
A, part 2(iii)	☐	☐
B (i)	☐	☐
B (ii)	☐	☒
C	☐	☒
D	☐	☒
E	☐	☒
F	☐	☒
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 12 April 2000

State Party to the Convention Sweden

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Defence Research Establishment FOA
Division of NBC-Defense

2. Responsible public or private organization or company Defence Research Establishment FOA

3. Location and postal address Cementvägen 20, S-901 82 Umeå, Sweden

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Ministry of Defence, Ministry for Foreign Affairs, partly research grants

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)

0

6. If no maximum containment unit, indicate highest level of protection

BL 3

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Methods are developed for rapid detection and identification for example application of gene probes. In order to develop protective measures virulence mechanisms are studied using four model organisms Y pseudotuberculosis, F tularensis, C burnetti and B anthracis

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1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO laboratory Biosafety Manual, or equivalent.

Confidence-building measure A part 2 (iii) para IX for 1999

Publication of results of relevant biological research at FOA NBC Defence

Results of biological research directly related to the convention performed at the National Defence Research Establishment in Umeå are encouraged to be published in international journals. Some work are also published as public FOA-reports, abstract of which are submitted to the NTIS Database (National Technical Information Service). Reprints of scientific papers and FOA-reports may be ordered by writing to:

National Defence Research Establishment, SE-901 82 Umeå, Sweden.

1999

Anders Johansson, Lennart Berglund, Ulla Eriksson, Ingela Goransson, Ralfh Wollin, Mats Forsman, Arne Tärnvik, Anders Sjostedt. 2000. A comparative analysis of PCR versus culture for the diagnosis of ulceroglandular tularemia. J. Clinical Microbiol. 38:22-26.

Forsman M. Henningsson E., Johansson T., Larsson E. Sandström G. 2000. The zoonotic bacterium Francisella tularensis does not manifest virulence in viable but non-culturable state. FEMS Microbiol. Ecol. 31:217-224.

Hooper JW, Kamrud KI, Elgh F, Custer D, Schmaljohn CS. DNA vaccination with hantavirus M segment elicits neutralizing antibodies and protects against seoul virus infection. Virology. 1999 Mar 15;255(2):269-78. PMID: 10069952; UI: 99170720

Kamrud KI, Hooper JW, Elgh F, Schmaljohn CS. Comparison of the protective efficacy of naked DNA, DNA-based Sindbis replicon, and packaged Sindbis replicon vectors expressing Hantavirus structural genes in hamsters. Virology. 1999 Oct 10;263(1):209-19. PMID: 10544095; UI: 20013322

Leary, S.E.C., Griffin, K.F., Galyov, E. E., Hewer, J., Williamson, E.D., Forsberg, Å., and Titball, R.W. 1999. *Yersinia* outer proteins (Yops) E, K, and N are antigenic but non-protective compared to V antigen, in a murine model of bubonic plague. Microb Pathog, 26: 159-169.

Li QG, Henningsson A, Juto P, Elgh F, Wadell G. Use of restriction fragment analysis and sequencing of a serotype-specific region to type adenovirus isolates. J Clin Microbiol. 1999 Mar;37(3):844-7. PMID: 9986873; UI: 99143271

Persson, C., Nordfeldt, R., Andersson, K., Forsberg, Å., Wolf-Watz, H., and Fällman, M. 1999. Localisation of the *Yersinia* PTPase to focal complexes is an important virulence mechanism. Mol Microbiol, 33: 828-838.

Pettersson, J., Holmström, A., Hill, J., Leary, S., Frithz-Lindsten, E., von Euler-Matell, A., Titball, R., Forsberg, Å., and Wolf-Watz, H. 1999.The V antigen of *Yersinia* is surface exposed before cell contact and involved in virulence protein translocation. Mol Microbiol, 32: 961-976

Pär Larsson, Per Wikström, and Mats Forsman 1999. Quantitative properties of random amplified polymorphic DNA (RAPD). Quantitative Microbiology. 2:171-181

Wikström P., Andersson A-C., and Forsman M. 1999.Biomonitoring complex microbial communities using random polymorphic DNA and principal component analysis. FEMS Microbiology Ecology. 28:131-139

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ *The National Veterinary Institute*

2. Responsible public or private organization or company *Ministry of Agriculture*

3. Location and postal address *Uppsala Biomedical Centre and Ultuna Campus Uppsala*
Postal adress:
SE-751 89 UPPSALA, Sweden

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m^2)
Ministry of Agriculture

6. If no maximum containment unit, indicate highest level of protection
(20 m^2) Designed according to BSL4 only as to prevent accidental release to the environment.

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate
Containment units (BSL3, 100m^2) are used for diagnostic work on ***bacteria****: Bacillus anthracis, Brucella spp, Francisella tularensis, Mycobacterium spp, Pseudomonas spp and EHEC*
Containment units (BSL3 20 m^2, and BSL4 20m^2 according to above description under number 5) for diagnostic work on viruses:
IBR-virus, Pseudorabies, Foot and mouth, Newcastle disease, Rabies, SVD, TGE, VS, Hanta, LCM, Sendai, Togaviridae, Classic swine fever, PRRS, Rickettsia spp, Chlamydia psittaci, and Coxiella burnetti.

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Confidence-building measure B, form B (i)

Updated list of reported cases of infectious diseases in Sweden according to the communicable disease act, prepared by the Swedish Institute for Infectious Disease Control.

År för anmälan/*Year of report*	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Folkmängd (tusental)/*Population (thousands)*	8459	8527	8590	8644	8692	8781	8827	8844	8846	8851	
AIDS *AIDS*	121	131	137	126	175	180	198	153	77	63	23
Amöbadysenteri *Amoebiasis*	1072	2299	1755	3830	2267	1038	527	441	493	445	464
Atypiska mykobakterier* *Mycobacterioses, atypical**	52	91	79	123	170	212	133	189	140	114	137
Botulism *Botulism*	0	1	2	0	0	2	1	1	0	0	0
Campylobacter* *Campylobacteriosis**	1861	4006	4275	4475	4485	5529	5580	5081	5306	6543	7137
Difteri, sjukdomsfall *Diphtheria, clinical cases*	0	0	0	0	0	0	0	0	1	0	0
Difteri, smittbärare *Diphtheria, carriers*	0	0	0	0	0	0	0	0	0	0	0
EHEC O157** *Enterohaemorrhagic E. coli O157*								91	137	72	59
Fläckfeber *Typhus fever*	0	0	0	0	0	1	1	0	0	0	0
Giardiasis* *Giardiasis**	1465	3765	2987	7468	4061	1981	1505	1506	1550	1475	1497
Gonorre *Gonorrhoea*	1100	840	617	474	367	307	246	211	246	343	427
Gula febern *Yellow fever*	0	0	0	0	0	0	0	0	0	0	0
Hepatit A *Hepatitis A*	245	263	294	274	274	344	600	487	620	233	161
Hepatit B, akut *Hepatitis B, acute*	266	257	254	207	211	264	294	135	154	136	
Hepatit B, bärare *Hepatitis B, carriers*	1014	1966	1469	3039	1996	1147	1059	767	711	371	1100
Hepatit Non A- non E *Hepatitis non A, non E*	104	109	145	258	19	2	2	3	4	0	1
Hepatit C *Hepatitis C*		459	2359	4537	4028	3726	2872	2613	2358	2593	2330
Hepatit Delta *Delta hepatitis*	5	10	12	5	5	5	8	9	4	2	9
Hepatit E *Hepatitis E*					5	4	6	5	5	4	3
Haemophilus influenzae typ B, invasiv**								15	12	24	13
HIV	304	335	327	350	390	259	247	221	241	250	277
HTLV I/II								6	7	5	1
Kikhosta*** *Pertussis****									2490	1300	1749
Klamydia *Chlamydial infection*	29319	26764	20986	17081	14963	13625	13785	13955	13905	15200	16711
Kolera *Cholera*	0	0	0	1	0	1	1	0	0	0	0
Legionellos* *Legionellosis**	18	36	75	72	42	39	44	55	87	76	67
Listerios *Listeriosis*	23	13	28	27	35	34	34	23	18	32	27
Malaria *Malaria*	180	205	149	124	143	160	161	189	183	172	155
Meningokocksjukdom *Meningococcal infection*	103	102	130	114	88	66	75	102	75	63	57
Mjältbrand *Anthrax*	0	0	0	0	0	0	0	0	0	0	0
Mässling** *Morbilli***								44	62	6	20
Nefropatia epidemica* *Nephropathia epidemica**	20	67	197	202	137	112	213	196	118	518	389
Ornithos *Psittacosis*	78	41	52	52	50	55	56	25	40	26	22
Paratyfoid *Paratyphoid fever*	42	44	54	42	22	27	29	15	25	25	95
Pc-res. pneumokocker** *Pc-res. pneumococci***								362	528	491	419
Pest *Plague*	0	0	0	0	0	0	0	0	0	0	0
Polio *Poliomyelitis*	0	0	0	1	0	0	0	0	0	0	0
Påssjuka** *Mumps***								6	18	25	12
Rabies* *Rabies**	0	0	0	0	0	0	0	0	0	0	0
Röda hund** *Rubella***								6	2	0	0
Salmonellos *Salmonellosis*	5005	5706	5534	5159	4344	5097	3562	3861	4286	4308	7884
Shigellos *Shigellosis*	768	913	686	1007	755	698	561	565	585	540	423
Syfilis, medfödd *Syphilis, congenital*	1	0	3	3	0	0	0	0	1	0	0
Syfilis, förvärvad *Syphilis, acquired*	88	143	118	77	96	67	69	52	46	42	39
Tetanus *Tetanus*	0	3	1	0	1	1	3	3	3	2	2
Toxoplasmos *Toxoplasmosis*	27	22	17	17	8	6	8	16	10	11	4
Trikinos *Trichinosis*	0	0	1	0	0	0	0	0	0	0	0
Tuberkulos**** *Tuberculosis*****	595	557	519	611	619	529	570	517	449	468	494
Tularemi *Tularemia*	24	0	2	2	7	7	133	48	10	105	75
Tyfoid *Typhoid fever*	31	32	28	24	22	16	30	23	18	23	12
Ulcus molle *Chancroid*	5	7	2	2	4	2	2	1	1	1	1
Virala hemorrh. febrar* *Viral haemorrhagic fevers**	0	1	0	0	0	0	0	0	0	0	0
Yersinios** *Yersiniosis***								471	558	558	428
Återfallsfeber *Relapsing fever*	0	0	0	0	0	0	0	0	0	0	0

Tomma fält = ingen rapportering
* fr.o.m. 890701
** fr.o.m. 960101
*** fr.o.m. 970101
**** T.o.m. 1994 baseras statistiken på diagnosår, fr.o.m. 1995 på anmälningsår

Empty fields = no reporting
from 1 July 1989
from 1 January 1996
from 1 January 1997
Up to 1994 the statistics is based on year of diagnosis, from 1995 on year of reporting

The Conference notes the importance of the confidence-building measures agreed upon at the Second Review Conference, as well as the modalities elaborated by the Ad Hoc Meeting of Scientific and Technical Experts from States Parties to the Convention held in 1987. The Conference recognises the exchange of information that took place on this agreed basis between 1987 and 1991 inclusive. The Conference urges all States Parties to submit information to future rounds of information exchange.

With a view to promoting increased participation and to strengthening further the exchange of information, the Conference agrees to reaffirm those measures established at the Second Review Conference with the following improvements: to add a declaration on nothing to declare or nothing new to declare; to amend and to extend the exchange of data on research centres and laboratories; to amend the exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins; to amend the measure for the active promotion of contacts; and to add three new confidence-building measures entitled "Declaration of Legislation, Regulations and Other Measures"; "Declaration of Past Activities in Offensive and/or Defensive Biological Research Development Programmes"; and "Declaration of Vaccine Production Facilities".

Accordingly, the Conference, mindful of the provisions of Article V and Article X, and determined to strengthen the authority of the Convention and to enhance confidence in the implementation of its provisions, agrees that the States Parties are to implement, on the basis of mutual cooperation, the following measures, annexed to the Final Declaration, in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions, and in order to improve international cooperation in the field of peaceful bacteriological (biological) activities.

1. Declaration form on Nothing to Declare or Nothing New to Declare

2. Confidence-building measure "A":
   - Part 1: Exchange of data on research centres and laboratories;
   - Part 2: Exchange of information on National Biological Defence Research and Development Programme.

3. Confidence-building measure "B":

   - Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins.

4. Confidence-building measure "C":

   - Encouragement of publication of results and promotion of use of knowledge.

5. Confidence-building measure "D":

   - Active promotion of contacts.

6. Confidence-building measure "E":

   - Declaration of Legislation, Regulations and Other Measures.

7. Confidence-building measure "F":

   - Declaration of Past Activities in Offensive and/or Defensive Biological Research and Development Programmes.

8. Confidence-building measure "G":

   - Declaration of Vaccine Production Facilities.

The Conference also agrees that the exchange of information and data, using the revised forms, be sent to the United Nations Department for Disarmament Affairs no later than 15 April on an annual basis and should cover the previous calendar year.

The Conference recognises that the new and the revised procedures which the States Parties have agreed to implement will add further duties to, and will make even greater demands on the time of, the United Nations Department for Disarmament Affairs. The Conference therefore requests the United Nations Secretary-General to allocate the necessary staff resources and other requirements based in the United Nations Department for Disarmament Affairs in Geneva to assist the effective implementation of the relevant decisions of the Third Review Conference, in particular of the confidence-building measures. In that respect the Secretary-General is requested to receive, compile, and make available to States Parties information related to the implementation of the Convention and of the decisions of the Third Review Conference. The use of the United Nations Department for Disarmament Affairs

SWITZERLAND

1 May 2000

The Permanent Observer Mission of Switzerland to the United Nations presents its compliments to the Secretary-General of the United Nations and has the honour to transmit the "REPORT BY SWITZERLAND IN ACCORDANCE WITH THE FINAL DECLARATION OF THE THIRD REVIEW CONFERENCE OF THE STATES PARTIES TO THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION"

REPORT BY SWITZERLAND IN ACCORDANCE WITH THE FINAL DECLARATION OF THE THIRD REVIEW CONFERENCE OF THE STATES PARTIES TO THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION.

Declaration form on nothing to declare or nothing new to declare

Measure	Nothing to declare	Nothing new to declare
A Part 1	☐	☒
A Part 2 (i)	☐	☐
A Part 2 (ii)	☐	☐
A Part 2 (iii)	☒	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☐	☒
D	☒	☐
E	☐	☒
F	☒	☐
G	☐	☒

Date: 13 April 2000

State Party to the Convention: **Switzerland**

Form A, part 2 (i)

National biological defence research and development programme declaration

Is there a national programme to conduct biological defense research and development within the territory of the State Party, under ist jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, detection, treatment, toxicology, physical protection, decontamination and other related research.

YES

If the answer is „yes", complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)

National biological defence research and development programme declaration

1. State the objectives and funding of the Programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

The objective of the programme is to develop rapid identification and characterization tests for biological agents and toxins either by immunological or molecular methods.

2. State the total funding for the programme and its source.

Total funding for the programme by the Defence Procurement Agency is in the order of CHF 500'000 per year.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

YES: University of Zürich: Institut für Virologie, Winterthurstr. 266a, CH-8057 Zürich
University of Bern: Institut für allgemeine Mikrobiologie, Baltzerstr. 4, CH-3012 Bern
Pflanzenphysiologisches Institut, Altenbergrain 21, CH-3012 Bern
Institut für klinische Mikrobiologie und Immunologie, Frohbergstr. 3, CH-9007 St.Gallen

The programme is supervised by the AC-Laboratorium Spiez which is part of the Defence Procurement Agency

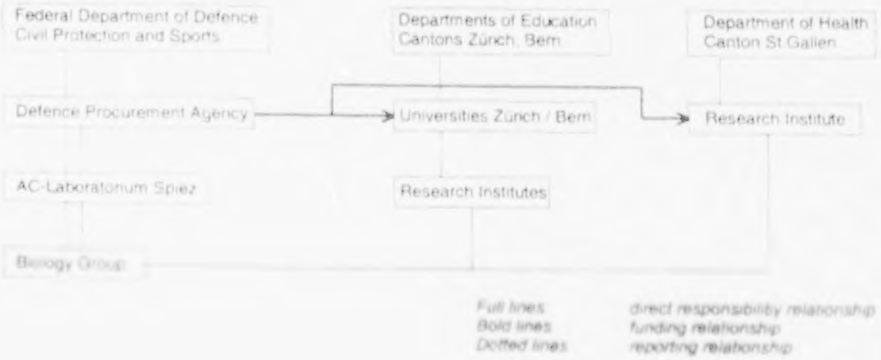
4. If „yes", what proportion of the total funds for the programme is expended in these contracted or other facilities?

65%

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

See para 1

6. Provide a diagram of the organizational structure of the programme and the reporting relationship (include individual facilities participating in the programme).


Federal Department of Defence Civil Protection and Sports
Departments of Education Cantons Zürich, Bern
Department of Health Canton St.Gallen
Defence Procurement Agency
Universities Zürich / Bern
Research Institute
AC-Laboratorium Spiez
Research Institutes
Biology Group
Full lines: direct responsibility relationship
Bold lines: funding relationship
Dotted lines: reporting relationship

Form B

Exchange of information on outbreaks of infectious diseases and similar occurences caused by toxins

General remarks:

1. Human diseases

The Swiss *Bundesamt für Gesundheit* (Federal Office for Public Health) is responsible for the surveillance and reporting of diseases. A nationwide notification system is regulated by the *Verordnung über die Meldung übertragbarer Krankheiten des Menschen* (Decree on the Notification of Communicable Human Diseases), dated September 1987, which is based on the *Gesetz über die Bekämpfung übertragbarer Krankheiten des Menschen* (Law on the Control of Communicable Human Diseases).

On the basis of this decree every medical practitioner is obliged to report the occurence of certain notifiable diseases. In addition medical laboratories have to report the identification of notifiable agents. The results of this survey are published in the weekly *Bulletin des Bundesamtes für Gesundheit*. The *Bulletin* which also contains detailed reports on the epidemiological situation in the country is transmitted to the World Health Organisation.

The figures given in Form B (i)-1 are based on the annual compilation of notifiable diseases and infectious agents published in the *Bulletin*.

In 1999 Switzerland has not suffered from outbreaks of communicable human diseases that deviate from the normal pattern.

2. Animal diseases

According to the *Gesetz über die Bekämpfung der Tierseuchen* (Law on the Control of Animal Epidemics) and the corresponding decree certain animal diseases have to be reported to the *Bundesamt für Veterinärwesen* (Federal Veterinary Office) which in turn is responsible for the reporting to the OIE (Office International des Epizooties) concerning the diseases covered by the A- and B-list of the OIE. Epidemiological data are regularly published in the weekly *Bulletin des Bundesamtes für Veterinärwesen*. The figures given in Form B (i)-2 are based on the annual compilation of notifiable diseases in this bulletin.

In 1999 Switzerland has not suffered from outbreaks of communicable animal diseases that deviate from the normal pattern.

3. Plant diseases

The Bundesamt für Landwirtschaft (Federal Office of Agriculture) reports regularly to the EPPO (European Plant Protection Organisation) concerning the occurence of communicable plant diseases. Certain plant diseases are notifiable according to the Landwirtschaftsgesetz (Law on Agriculture) and the corresponding Verordnung über Pflanzenschutz (Decree on Plant Protection).

In 1999 Switzerland has not suffered from outbreaks of communicable plant diseases that deviate from the normal pattern.

Form 3 (I)-1

Background information on outbreaks of reportable infectious diseases in human

Disease / Infectious agent identified	1995	1996	1997	1998	1999	Ø 95-99
Bacterial:						
Anthrax/B. anthracis	0	0	0	0	0	0
Brucella species	26	18	16	7	8	15
Clostridium botulinum	0	0	1	0	0	0
Corynebacterium diphteriae	0	0	0	0	0	0
Francisella tularensis	2	2	1	0	1	1
Leptospira species	4	2	7	4	?*	5
Plague	0	0	0	0	0	0
Salmonella paratyphi	10	8	10	13	16	11
Salmonella typhi	37	25	20	22	16	24
Shigella species	533	439	625	500	552	530
Tetanus	2	3	2	1	3	2
Vibrio cholerae	0	0	1	2	0	1
Rickettsial/Chlamydial:						
Chlamydia psittaci	2	1	3	?	?*	2
Coxiella burneti	14	13	16	11	?*	14
Rickettsia species	5	7	3	12	?*	7
Viral:						
Dengue-Fever	19	18	26	68	?*	30
Tick-borne-encephalitis-Virus	60	62	123	67	112	85
Smallpox	0	0	0	0	0	0
Viral Hemorrhagic Fever	0	0	0	0	0	0
Yellow-Fever	0	0	0	0	6	1
Protozoal:						
Malaria/Plasmodium species	292	293	322	339	316	312
Toxoplasma gondii	454	485	389	278	?*	412

* data not available

Form B (i)-2

Background information on outbreaks of reportable infectious diseases in animals

Disease / Infectious agent identified	1995	1996	1997	1998	1999	Ø 95-99
African swine fever	0	0	0	0	0	0
Anthrax	0	0	1	0	0	0
Aujesky's disease	0	0	0	0	0	0
Bluetongue	0	0	0	0	0	0
Brucellosis, bovine	0	1	0	0	0	0
Brucellosis, caprine and ovine	0	0	0	0	0	0
Foot and mouth disease	0	0	0	0	0	0
Goat pox	0	0	0	0	0	0
Hog cholera (swine fever)	0	0	0	125*	0	25*
Newcastle disease	2	5	0	0	0	1
Peste des petits ruminants	0	0	0	0	0	0
Rabies	23	5	2	0	0	6
Rift Valley Fever	0	0	0	0	0	0
Rinderpest	0	0	0	0	0	0
Sheep pox	0	0	0	0	0	0
Swine vesicular disease	0	0	0	0	0	0
Teschen disease	0	0	0	0	0	0
Vesicular stomatitis	0	0	0	0	0	0

*: all cases in wild sows

TUNISIA

22 May 2000

La Mission Permanente de Tunisie auprès de l'Organisation des Nations Unies présente ses compliments au Secrétariat de l'Organisation des Nations Unies, Département des Affaires du Désarmement, a l'honneur de lui communiquer que dans le cadre de la mise en œuvre des mesures de confiance concertées tel que convenu lors de la 3ème et 4ème Conférence d'examen de la Convention sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques ou à Toxines et sur leur destruction, le Gouvernement Tunisien n'a « Rien à déclarer » au sujet de ces mesures au titre de l'année 1999.

TURKEY

14 April 2000

The Permanent Mission of Turkey to the United Nations presents its compliments to the United Nations Department for Disarmament Affairs and has the honour to transmit herewith the annual data declarations on the Confidence Building Measures for the year 1999 with regard to the decision of the Third Review Conference of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☒	☐
A, part 2 (ii)	☒	☐
A, part 2 (iii)	☒	☐
B (i)	☒	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☒	☐
F	☒	☐
G	☐	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 14.04.2000

State Party to the Convention: TURKEY

Declaration of Vaccine Production Facilities

1. Name of the facility : Refik Saydam Hygiene Center

2. Location (Mailing address) Cemal Gürsel Cad. No:18
06100, Sıhhiye
Ankara/TURKEY

3. General description of the types of diseases covered

Refik Saydam Hygiene Center is an hygiene institution that belongs to the Ministry of Health that undertakes three major functions. They are:

a- Control of pharmaceuticals, biological products, food safety and environmental detection
b- Production of vaccines and sera for protecting of the people against contagious diseases.
c- Carrying out research and development.

The main vaccines produced at the institute are Tetanus, Diphteria, Pertussis and BCG in order to meet the country's demand for vaccination. Diphteria, Pertussis and BCG vaccines are produced by using conventional techniques (manually in bottles.)

The institute developed a modernization program of the existing facilities for Tetanus Vaccine Production Laboratories which was completed recently. The tetanus toxoid production laboratories have two modern fermenters, one 450 lt volume and the other is 50 lt volume and mixing vessels accordingly.

UNITED STATES OF AMERICA

17 April 2000

In accordance with Article V of the Biological Weapons Convention Confidence Building Measures (CBMs), I am enclosing the report of the United States. Please let me know if we can be of further assistance.

REPORT OF THE UNITED STATES OF AMERICA TO THE UNITED NATIONS DEPARTMENT OF DISARMAMENT AFFAIRS

APRIL 2000

Information submitted pursuant to the procedural modalities
agreed upon in April 1987 at the "Ad Hoc Meeting of Scientific
and Technical Experts from States Parties to the Convention
on the Prohibition of the Development, Production and
Stockpiling of Bacteriological (Biological) and Toxin Weapons
and on Their Destruction" as amended by the States Parties
at the September 1991 Third Review Conference

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APRIL 15, 2000

REPORT OF THE UNITED STATES OF AMERICA TO THE UNITED NATIONS DEPARTMENT FOR DISARMAMENT AFFAIRS

Pursuant to the procedural modalities agreed upon in April 1987 at the "Ad Hoc Meeting of Scientific and Technical Experts from States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction," the United States of America submits the following information under Article V of the Convention

Item 1 CONFIDENCE BUILDING MEASURE A, PART 1
Exchange of Data on Research Centers and Laboratories (Annex I)

CONFIDENCE BUILDING MEASURE A, PART 2 (i), (ii), (iii)
Exchange of Information on National Biological Defense Research and Development Programs (Annex I)

Item 2 CONFIDENCE BUILDING MEASURE B
Exchange of Information on All Outbreaks of Infectious Diseases and Similar Occurrences Caused by Toxins (Annex II)

Item 3 CONFIDENCE BUILDING MEASURE C
Encouragement of Publication of Results and Promotion of Use of Knowledge (Annex III)

It is U.S. policy regarding the publication of results relevant to Items 1 and 2 above to encourage researchers to publish the results of their studies in national and international science journals readily available to the scientific community

Item 4 CONFIDENCE BUILDING MEASURE D
Active Promotion of Contacts (Annex IV)

Item 5 CONFIDENCE BUILDING MEASURE E
Declaration of Legislature, Regulations and Other Measures (Annex V)

Item 6 CONFIDENCE BUILDING MEASURE F
Declaration of Past Activities in Offensive and/or Defensive Biological Research Programs (Annex VI)

Item 7 CONFIDENCE BUILDING MEASURE G
Declaration of Licensed Human Vaccine Production Facilities (Annex VII)

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE FOR USE IN THE INFORMATION EXCHANGE

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE
A, PART 1		
A, PART 2(I)		
A, PART 2 (II)		
A, PART 2 (III)		
B (I)		
B (II)	X	
C		
D		X
E		X
F		X
G		

(PLEASE MARK EACH MEASURE, AS APPROPRIATE.)

DATE APRIL 15, 2000

STATE PARTY TO THE CONVENTION UNITED STATES OF AMERICA

ANNEX I

CONFIDENCE BUILDING MEASURE A (PART 1)

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

UNITED STATES OF AMERICA

APRIL 2000

Form A, Part 1

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

1. Name(s) of the research center and/or laboratory	National Institutes of Health (NIH)
2. Responsible public or private organization or company	Public Health Service
3. Location and Postal Address	Bethesda, Maryland, USA Director, Division of Safety Bldg. 31, Room 1C02 National Institutes of Health Bethesda, Maryland 20892

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense:

Public Health Service (entirely)

5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters):

The maximum containment facility, located in Building 41A, has been put back into service utilizing a suit system instead of Class III cabinet lines. The overall size of the building is approximately 464 sq. meters. The interior work area minus the mechanical area is approximately 186 sq. meters.

6. If no maximum containment unit, indicate highest level of protection:

Not Applicable

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:

No current research is being conducted in the NIH maximum containment laboratory.

---

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, Part I

Exchange of Data on Research Centers and Laboratories

1. Name(s) of the research center and/or laboratory	National Cancer Institute (NCI) Frederick Cancer Research and Development Center (FCRDC)
2. Responsible public or private organization or company	National Cancer Institute National Institutes of Health U.S. Dept. of Health and Human Services
3. Location and Postal Address	National Cancer Institute-Frederick Cancer Research and Development Center P.O. Box B Frederick, Maryland 21702-1201

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense:

Department of Health and Human Services
Public Health Service (entirely)

5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters):

Decommissioned. All Class III cabinets within the approximately 182.5 square meter BL-4 facility were removed from in December 1994. As of February 1995, that portion of the facility formerly containing the Class III cabinet system has been utilized as a store room within a BL-2 animal facility.

6. If no maximum containment unit, indicate highest level of protection:

BL-3

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:

A total of 12 BL-3 laboratory suites, composed of a total of 34 rooms, located in 7 different buildings and occupying approximately 811 square meters are on the premises of the NCI-FCRDC. The majority of these laboratories are supporting Human Immunodeficiency Virus (HIV) research. One BL-3 laboratory (56 square meters) had been used in vaccine development research for Venezuelan Equine Encephalitis Virus (VEE). This laboratory is currently not in use. The VEE vaccine project is scheduled to resume later this year. On March 13, 1996, the NCI-FCRDC reclassified 642 square meters of laboratory space which was previously considered BL-3 to BL-2.

---

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, Part I

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

1. Name(s) of the research center and/or laboratory	National Center for Infectious Diseases (NCID) of the Centers for Disease Control and Prevention (CDC)
2. Responsible public or private organization or company	Centers for Disease Control and Prevention (CDC)
3. Location and Postal Address	Atlanta, Georgia, USA National Center for Infectious Diseases 1600 Clifton Road Atlanta, Georgia 30333

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense

Public Health Service (entirely)

5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters)

Laboratory was constructed in 1988 and contains a separate BL4 area having an estimated 678 square meters of floor space (including animal facilities). (No Change)

6. If no maximum containment unit, indicate highest level of protection

Not Applicable

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate

Viral research and related animal vector research, primarily in the field of hemorrhagic viral disease. Development of candidate vaccines, diagnostic reagents and basic studies on the characteristics and epidemiology of these viruses.

---

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, Part I

Exchange of data on research centers and laboratories

1. Name(s) of the research center and/or laboratory	Plum Island Animal Disease Center
2. Responsible public or private organization or company	U.S. Department of Agriculture
3. Location and postal address	Plum Island is located about 1.5 nautical miles off the northeastern end of Long Island, New York Plum Island Animal Disease Center P.O. Box 848 Greenport, Long Island New York 11944-0848

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense

U.S. Department of Agriculture (entirely)

5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters)

The Animal Disease Center consists of two biocontainment buildings at BL3 (18,580 and 1,091 square meters of floor space, respectively).

6. If no maximum containment unit, indicate highest level of Protection

The Center has the following features of a BL4 facility: biowaste treatment plant, complete clothing change and shower facilities, single pass air, double door sterilizers at building exit zones, HEPA filtered exhaust air in all laboratories and in 40 percent of animal rooms, certified incinerators for pathological wastes. The following features of a BL4 facility are lacking: operational Class III gas-tight glove box, ventilated personnel suit room.

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate

Diagnosis of, and research on, animal diseases which do not occur in the United States (such as foot-and-mouth disease virus). This facility maintains a reference repository of animal disease agents (and diagnostic capabilities to recognize them should they occur in the United States).

---

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A, Part I

Exchange of Data on Research Centers and Laboratories

1. Name(s) of the research center and/or laboratory	U.S. Army Institute of Infectious Diseases (USAMRIID)
2. Responsible public or private organization or company	U.S. Army Medical Research and Materiel Command
3. Location and Postal Address	Frederick, Maryland, USA Commander, USAMRIID 1425 Porter Street Fort Detrick Frederick, Maryland 21702-5011

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense

U.S. Department of Defense (entirely)

5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters)

BL4 Laboratory (979 sqM)

If no maximum containment unit, indicate highest level of Protection.

N/A

7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate

The U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) conducts research to develop strategies, products, information, procedures and training programs for medical defense against biological warfare threats and infectious diseases. Medical products developed to protect military personnel against biological agents include vaccines, drugs, diagnostic capabilities and various medical management procedures.

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* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

ANNEX I

CONFIDENCE BUILDING MEASURE A
PART 2 (I)

EXCHANGE OF INFORMATION ON NATIONAL BIOLOGICAL DEFENSE PROGRAMS

UNITED STATES OF AMERICA

APRIL 2000

Form A, Part 2 (i)

NATIONAL BIOLOGICAL DEFENSE RESEARCH AND DEVELOPMENT PROGRAM DECLARATION

(1) Is there a national program to conduct biological defense research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

[✓ Yes]/No

If the answer to (1) is Yes, complete Form A, part 2 (ii) which will provide a description of the program.

ANNEX I

CONFIDENCE BUILDING MEASURE A
PART 2 (iii)

EXCHANGE OF INFORMATION ON NATIONAL BIOLOGICAL DEFENSE PROGRAMS

UNITED STATES OF AMERICA

APRIL 2000

Form A, Part 2 (ii)
National Biological Defense Research and Development Program

The DoD Biological Defense Research Program

II. Description

1. **State the objectives and funding of the program and summarize the principal research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.**

The Soldier and Biological Chemical Command (SBCCOM) is responsible for conducting research, development and engineering efforts that support the development of non-medical defensive materiel against biological agents. These efforts are executed through the Research, Development and Acquisition Business Area (RDA) of SBCCOM that includes the Edgewood Chemical and Biological Center (ECBC), the Project Manager for Nuclear, Biological and Chemical Defense Systems (PM NBC Defense) and the Program Director for Biological Defense Systems (PDBDS). Efforts are ongoing for the development of detection, identification and warning systems for all known and future chemical and biological (CB) agents, including toxins, eye/respiratory protection systems and support to chemical over-garment programs, air handling and filtration systems for vehicles, vans, shelters and aircraft; and decontamination systems. In addition, SBCCOM supports the U.S. efforts for the chemical and biological treaty program in both verification and compliance.

2. **State the total funding for the program and its source.**

The RDA Business Area, as the executor of the RDA program for SBCCOM, is funded by the Office of the Secretary of Defense to conduct both Chemical and Biological (CB) defense programs as a single entity. Some efforts are applicable to biological defense as well as chemical defense, which makes it difficult to accurately define biological defense funding alone. An estimated $37.4M was reported to have been obligated in support of the Biological Defense Program during FY99.*

*NOTE: The two major contributors to the biological defense program efforts are the ECBC program funded by OSD under Defense-wide Budget Areas 1-6 and the Office of the Program Director for Biological Defense Systems (OPDBDS) funded through the Joint Program Office for Biological Defense and Counter Proliferation Office, OSD. These efforts support the technology base for the biological program and the development of rapid detection and identification biological agent systems. During FY99, ECBC obligated approximately $11.9M and the OPDBDS obligated approximately $25.5M in support of the Biological Defense Program.

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other non-defense facilities?

Yes

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

ECBC - TOTAL	$11.9M
Contracts	$5.0M
Other Government Agencies	$1.5M
OPDBDS - TOTAL	$25.5M
Contracts	$8.7M
Other Government Agencies	$12.0M

5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.

Contractor and other government agency support is obtained on an as-needed basis. Out-of-house support is utilized for antibody development, pathogenicity studies leading to information that could be used for the development of future biodetectors, determination of mass spectrometric bio-markers, testing of immunoassays and DNA probes on biosensor prototypes, and development of and simpler identification chemistries in addition to design and fabrication of prototype hardware and testing of biodetection systems.

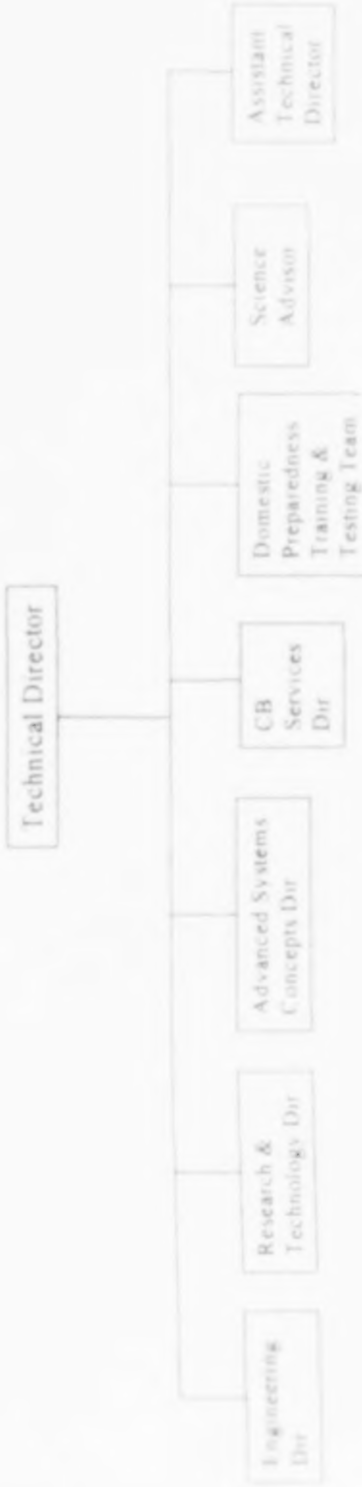
6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

See attached FY99 ECBC/SBCCOM Organizational Chart

7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See Part 2 (iii)

Edgewood Chemical Biological Center Organizational Chart FY99


Technical Director
Engineering Dir
Research & Technology Dir
Advanced Systems Concepts Dir
CB Services Dir
Domestic Preparedness Training & Testing Team
Science Advisor
Assistant Technical Director

Form A, Part 2(ii)
National Biological Defense Research and Development Program

The DoD Medical Biological Defense
Research and Development Program

II. Description

1. **State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.**

The objectives of the DoD Medical Biological Defense Research Program (MBDRP) are to develop measures for the diagnosis, prevention and treatment of disease caused by potential biological threat agents. Development of medical therapeutic measures, and patient treatment and management protocols are important components of the program. The purpose of the program is to maintain and promote a solid national defense posture with respect to potential biological threats. The program supports research, development, test and evaluation (RDT&E) efforts necessary for the development of medical defensive measures and materiel to meet these threats. In addition to promoting the national defense posture, the MBDRP benefits the scientific community in general through its research and the development of diagnostic methods and vaccine and drug therapies for the treatment of infectious diseases. The program does not include the development of any weapons, nor does it attempt to develop new pathogenic organisms for any use. All work conducted under the program is unclassified. However, results, may be classified if they impinge on national security by specifying U.S. military deficiencies, vulnerabilities, or significant breakthroughs in technology.

2. **State the total funding for the program and its source.**

Total DoD funding for the MBDRP for FY99 was $40,991,000. Approximately 7 percent of the FY99 U.S. Army MBDRP budget was spent on extramural contracts. The Naval Research and Development Command received $1,299,000 for FY99.

3. **Are aspects of this program conducted under contract with industry, academic institutions, or in other non-defense facilities?**

Some aspects of the MBDRP are conducted under contract with industry, academic institutions or in other non-defense facilities.

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

Approximately 7 percent of the FY99 U.S. Army MBDRP budget was spent on extramural contracts.

5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under paragraph 4.

MBDRP extramural contracts for basic research are designed to support and supplement the in-house program. Contracts are awarded for determining the mechanism of action, pathology, and molecular biology of toxins, viruses and bacteria. Basic research is also being conducted on the application of new technologies for the rapid diagnosis and identification of threat agents as well as the evaluation of candidate vaccines and toxoids in animal models.

Advanced development of vaccine candidates is now managed by the Joint Program Office for Biological Defense. Specific areas of interest are pre-clinical studies, clinical trials to determine safety, immunogenicity and efficacy.

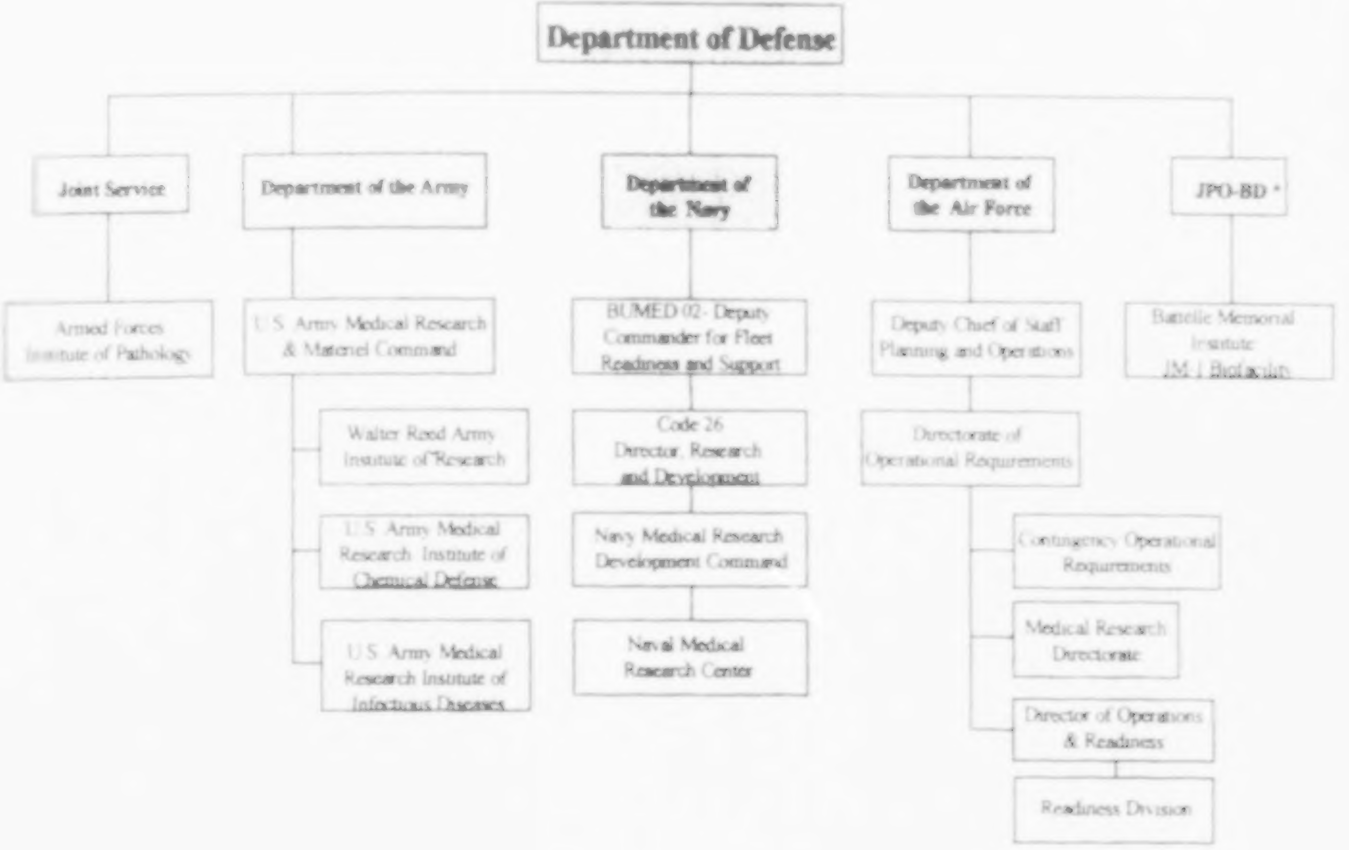
6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

A chart depicting the organizational structure for the DoD MBDRP is attached.

7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See Part 2 (iii)

Medical Biological Defense Research and Development Program
Organizational Structure


Department of Defense
Joint Service
Armed Forces Institute of Pathology
Department of the Army
U.S. Army Medical Research & Materiel Command
Walter Reed Army Institute of Research
U.S. Army Medical Research Institute of Chemical Defense
U.S. Army Medical Research Institute of Infectious Diseases
Department of the Navy
BUMED 02- Deputy Commander for Fleet Readiness and Support
Code 26 Director, Research and Development
Navy Medical Research Development Command
Naval Medical Research Center
Department of the Air Force
Deputy Chief of Staff Planning and Operations
Directorate of Operational Requirements
Contingency Operational Requirements
Medical Research Directorate
Director of Operations & Readiness
Readiness Division
JPO-BD *
Battelle Memorial Institute
JM-1 Biofacility

* BIODEFENSE ADVANCED DEVELOPMENT AND ACQUISITION VACCINE PROGRAM

Form A, Part 2(ii)
National Biological Defense Research and Development Program

Defense Threat Reduction Agency
Collateral Effects Program

II. Description

1. State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

The Defense Threat Reduction Agency (DTRA) Counter-proliferation Collateral Effects Branch (CPWE)'s Collateral Effects Program is an effort to develop biological and chemical source forms for the DTRA Hazard Prediction and Assessment Capability (HPAC). The program's expulsion experiments examined the effects resulting from expulsion of biological or chemical simulants from a storage facility. One full scale test occurred at DTRA's Permanent High Explosive Test Site, White Sands Missile Range, New Mexico. Scaled tests occurred at Waterways Experiment Station (WES), Vicksburg, MS. The Collateral Effects Program used only simulants considered to be nonpathogenic and non-toxic to humans. DiPel 2X ™ (Bacillus thuringiensis var. kurstaki) and water

2. State the total funding for the program and its source.

The (Calendar Year) 1999 funding for the biological defense-related part of this program was approximately $1,400,000, and $400,000 of which is already reflected in the overall biodefense budget for work at WES

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other non-defense facilities?

Yes. DTRA is the lead agency for this effort

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

- U.S. Army Engineer Waterways Experiment Station (WES) provided personnel and facilities for scaled tests. (27%)
- Battelle Memorial Institute (BMI) collected and analyzed Bt samples from DIPOLE EAST 169 test. (Its effort was funded together to 27% of the total funds mentioned in the DTRA Agent Neutralization Program description in the following section.)

The following organization is submitting its own BWC Confidence Building Measures input, and therefore its facilities description (Form A, Part 2(iii)) is excluded from this submission
- Dugway Proving Ground (DPG) determined the number of colony forming surrogates' spores

captured by an array of air samplers. Dugway positioned these samplers over the structure and in the surrounding area to collect samples from the plume during the field tests. (7%)

The following organizations did not conduct their own in-house tests, and therefore are not included in Form A, Part 2 (iii) describing facilities.
- Measurement Sciences measured particle size of expelled biological surrogates during execution of the field tests. They accomplished this with the use of a Particle Image Velocimeter (PIV) and light attenuation optics. (3%)
- Aerospace Corporation measured the volumetric amount of chemical transport in the field tests' plume and downwind cloud. They accomplished this with the use of one fixed infrared camera, one fixed Fourier Transform Infrared (FTIR) spectrometer, and two mobile spectrometers (one with a gas chromatograph). (7%)
- Sumner Associates estimated the mass of simulated agent expelled from the structure during the field tests. They accomplished this by measuring the amount of rare earth oxides expelled through pipes leading from the test structure and those from DPG downwind samplers. (3%)

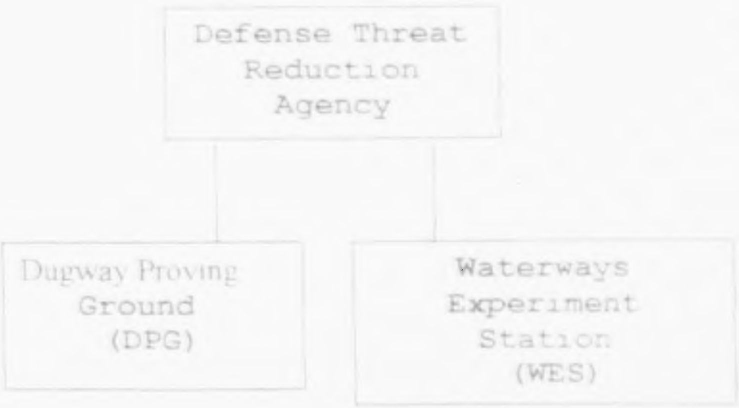
In addition, the following organization provided support only, and therefore are not included in Form A, Part 2 (iii) describing facilities.
- Field Command, Defense Threat Reduction Agency (FCDTRA) provided construction, instrumentation, photographic, videographic, and site excavation support for the full scale tests. (26%)

5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.

Please refer to Paragraph 4 above.

6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

DTRA Collateral Effects Program


Defense Threat Reduction Agency
Dugway Proving Ground (DPG)
Waterways Experiment Station (WES)

7. **Provide a declaration in accordance with Form a: part 2(iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.**

See Part 2(iii)

Form A, 2(ii)
National Biological Research and Development Program

Defense Threat Reduction Agency
Agent Neutralization Program

II. Description

1. State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

The Defense Threat Reduction Agency (DTRA) Counter-proliferation Collateral Effects Branch's (CPWE) Agent Neutralization Program is an effort to provide a basic understanding concerning how chemical and biological weapons agents respond to weapons environments. The Agent Neutralization program used biological agents and their surrogates: Bacillus anthracis (Ba) and Bacillus thuringiensis var. kurstaki (Bt).

2. State the total funding for the program and its source.

The response of biological agents to weapon-generated environments was the program's focus in 1999. The program provides data and models describing the neutralization of threat agents to thermal and reactive debris environment. The FY 1999 budget for the biological threat aspect of this program was $460,000 of DTRA Counterproliferation Directorate budget.

3. Are aspects of this program conducted under contract with industry, academic institutions, or other nondefense facilities?

Yes

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

Declaration: The following installations received a portion of their 1999 resources for work devoted to the Agent Neutralization Program.

Battelle Memorial Institute	$400,000
U.S. Army Dugway Proving Grounds (DPG)	$220,000 ($160K used in FY98, $60K in FY99). The DPG part of the work will be reported by DPG independently.

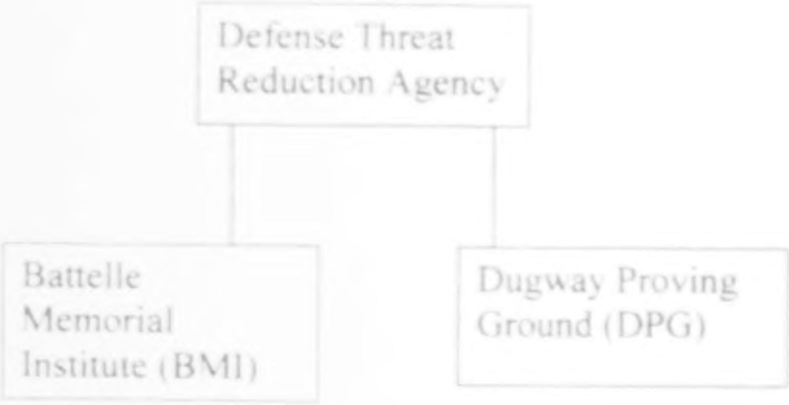
5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para 4.

Battelle Memorial Institute (Columbus, OH): $400,000 was used to subject small amounts (of the order of 100mg) of Bt to various high temperature incendiaries.

U.S. Army Dugway Proving Grounds (DPG, Dugway, UT): A small portion of $220,000 was used to grow small amount of Ba. Remaining funds will be used in FY99 to study Ba neutralization by high temperature incendiaries. DPG is submitting its own BWC Confidence Building Measures input, and therefore its facilities description (Form A, Part 2(iii)) is excluded from this submission.

6. Provide a diagram of the organizational structure of the program and the reporting relationship (include individual facilities participating in the program).

DTRA Agent Neutralization Program


Defense Threat Reduction Agency
Battelle Memorial Institute (BMI)
Dugway Proving Ground (DPG)

7. Provide a declaration in accordance with FORM A: part (iii) for each facility, both government and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdictions or control anywhere.

See Part 2 (iii)

Form A: Part 2 (ii)
National Biological Defense Research and Development Program

The Ballistic Missile Defense Organization (BMDO)
Lethality and Target Hardening (LTH) Project
Theater Missile Defense (TMD) Lethality Program

II. Description

1. State the objectives and funding of the program and summarize the principal research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

The Ballistic Missile Defense Organization (BMDO) Lethality and Target Hardening (LTH) Project has supported work to determine the effectiveness of various defensive concepts against threat missile systems. Potential threat missile systems include warheads carrying agents of biological origin (ABO).

Analysis of earlier known or suspected warhead designs, intelligence estimates and engineering judgment were the basis for postulating the ABO threat warheads. Simulated threat warhead mechanicals were designed and fabricated as fixtures to represent the essential characteristics of the postulated threats only as related to the study of theater missile defense methods to counter or destroy said threat. The simulated threat warhead mechanicals employed in this program were not operational and no aspect of the program makes them either operational or flight worthy designs.

2. State the total funding for the program and its source.

In the period, 1 January 1999 - 31 December 1999, the funding for the biological threat aspects of the program was $175K. These were test and evaluation funds from the Patriot Advanced Capability (PAC-3) program to provide and fund a ground test against a simulated biological target.

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other nondefense facilities?

Yes. Elements of this program have been conducted under contract with industry and academic institutions. The ground test of the simulated biological target was supported by ITT Advanced Engineering & Sciences.

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

Of the $175K provided in the period, 1 January 1999 - 31 December 1999, for the biological threat aspects of the program, $45K was provided ITT Advanced Engineering & Sciences for test support at the Hypervelocity Range/Track G facility. Of the remaining funds, $70K, was provided to the Arnold Engineering Development Center, Arnold Air Force Base.

5. **Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.**

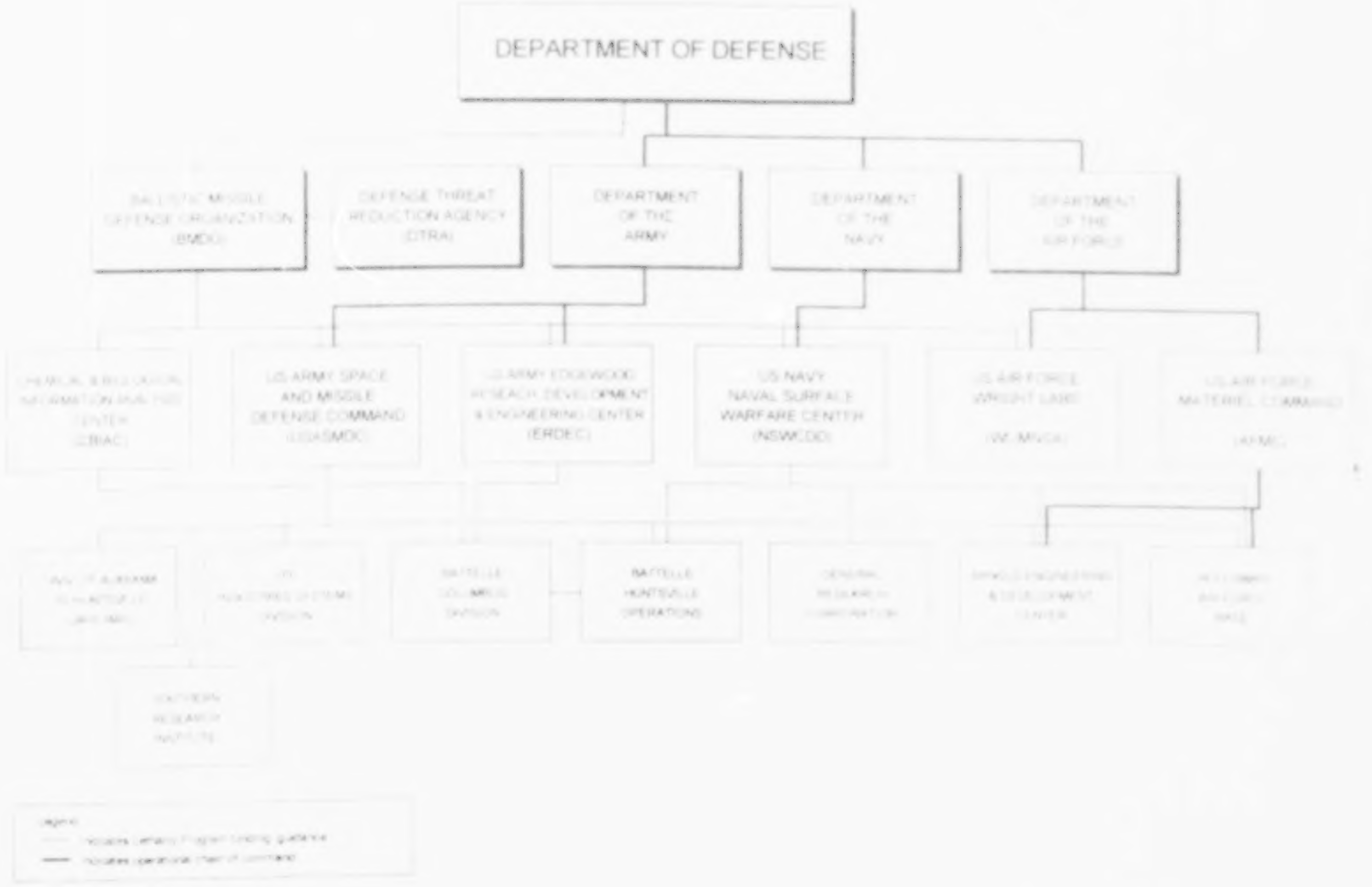
The ITT Advanced Engineering & Sciences provided technical and engineering support to the conduct and analysis of the test done at the Hypervelocity Range/Track G facility, Arnold Air Force Base. At the gun range, the simulated biological target was impacted by high speed projectiles to characterize and measure the target response and damage resulting from an intercept.

6. **Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).**

See attached diagram, which reflects the organizational structure utilized by the TMD Lethality Program.

7. **Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.**

A Form A Part 2 (iii) data sheet is provided for ITT Adanced Engineering & Sciences, and for the Hypervelocity Range/Track G, Arnold Engineering Development Center, Arnold Air Force Base, where the test was conducted.


DEPARTMENT OF DEFENSE
BALLISTIC MISSILE DEFENSE ORGANIZATION (BMDO)
DEFENSE THREAT REDUCTION AGENCY (DTRA)
DEPARTMENT OF THE ARMY
DEPARTMENT OF THE NAVY
DEPARTMENT OF THE AIR FORCE
CHEMICAL & BIOLOGICAL INFORMATION ANALYSIS CENTER (CBIAC)
US ARMY SPACE AND MISSILE DEFENSE COMMAND (USASMDC)
US ARMY EDGEWOOD RESEARCH, DEVELOPMENT & ENGINEERING CENTER (ERDEC)
US NAVY NAVAL SURFACE WARFARE CENTER (NSWCDD)
US AIR FORCE WRIGHT LABS (WL/MNGA)
US AIR FORCE MATERIEL COMMAND (AFMC)
UNIV OF ALABAMA IN HUNTSVILLE (UAH/MRI)
ITT INDUSTRIES SYSTEMS DIVISION
BATTELLE COLUMBUS DIVISION
BATTELLE HUNTSVILLE OPERATIONS
GENERAL RESEARCH CORPORATION
ARNOLD ENGINEERING & DEVELOPMENT CENTER
HOLLOMAN AIR FORCE BASE
SOUTHERN RESEARCH INSTITUTE
Legend
Indicates Lethality Program funding guidance
Indicates operational chain of command

ANNEX I

CONFIDENCE BUILDING MEASURE A
PART 2 (iii)

EXCHANGE OF INFORMATION ON NATIONAL BIOLOGICAL DEFENSE PROGRAM

UNITED STATES OF AMERICA

APRIL 2000

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

U.S. Army Medical Research Institute of Infectious Diseases

2. **Where is it located?**

Address:
U.S. Army Medical Research Institute of Infectious Diseases
1425 Porter St
Fort Detrick
Frederick, MD 21702-5011

Geographical location: Central Maryland, 45 miles (73 km) northwest of Washington, D.C.

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	0
BL2 (sqM)	25,514
BL3 (sqM)	3,161
BL4 (sqM)	979
Total (sqM)	29,654

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 437

II. **Division of personnel:**

Military	218
Civilian	219

III. **Division of personnel by category:**

Scientists	99
Engineers	0
Technicians	125
Admin. and Support staff	213

IV. **List the scientific disciplines represented in the scientific/engineering staff:**

Microbiology
Molecular Biology
Virology
Bacteriology
Chemistry
Clinical Microbiology
Veterinary Medicine
Immunology
Genetics
General Medicine
Infectious Disease
Preventive Medicine
Biology
Toxicology
Aerobiology
Entomology (Entomological work is being carried out to assess arthropod vector [illegible] are [illegible] safe.)

V. **Are contractor staff working in the facility?**

Yes - Number: 47

VI. **What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?**

U.S. Department of Defense (100%)

VII. **What are the funding levels for the following program areas:**

	FY99 Funding Levels
Research	$10,904,000
Development	$16,489,000
Advanced Development	$ 0
Total	$27,393,000

VIII. **Briefly describe the publication policy of the facility:**

Publications are prepared in accordance with AR 360-5 (Army Regulation) Manual. The research program is unclassified and scientists are encouraged to publish their results in the open peer-reviewed scientific literature as well as present their work at national and international professional meetings.

IX. **Provide a list of publicly available papers and reports resulting from work during the previous 12 months.**

Enclosures 1 (publications) and 2 (abstracts)

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. **Objectives:**

a. Develop medical countermeasures, to include candidate vaccines, diagnostic tests and drug or immunological therapies for biological agents, to include bacteria, viruses and toxins

b. Perform exploratory studies and advanced development of protective and therapeutic countermeasures and agent identification technologies

II. **Agents:**

Coxiella burnetti
Bacillus anthracis
Yersinia pestis
Botulinum neurotoxins
Ricin
Staphylococcal enterotoxins
Marine toxins
Fungal toxins
Cholera toxin beta subunit
Clostridium perfringens toxins
Venezuelan equine encephalitis
Eastern equine encephalitis
Western equine encephalitis
Filoviruses
Vaccinia
Monkey, camel and cowpox viruses
Burkholderia spp
Brucella spp
Francisella tularensis

III. **Outdoor studies:**
No outdoor biological defense aerosol studies are conducted at this facility

Encl 1
USAMRIID, Publications FY99
Form A 2 (iii) Question 4, IX

Publications FY99

Andrews GP, ST Strachan, GE Benner, AK Sample, GW Anderson Jr, JJ Adamovicz, SL Welkos, J Pullen, AM Friedlander 1999 Protective efficacy of recombinant *Yersinia* outer proteins against bubonic plague caused by encapsulated and non-encapsulated *Yersinia pestis* Infect Immun 67 1533-1537

Barnard JP, AM Friedlander 1999 Vaccination against anthrax with attenuated recombinant strains of *Bacillus anthracis* that produce protective antigen Infect Immun 67 562-567

Bavari S, RG Ulrich, RD LeClaire 1999 Cross-reactive antibodies prevent the lethal effects of *Staphylococcus aureus* superantigens J Infect Dis 180 1365-1369

Benner GE, GP Andrews, WR Byrne, SD Strachan, AK Sample, DG Heath, AM Friedlander 1999 Immune response to *Yersinia* outer proteins and other *Yersinia* antigens after experimental plague infection in mice Infect Immun 67 1922-1928

Brandler P, K Saikh, D Heath, A Friedlander, RG Ulrich 1998 Weak amnestic responses of inbred mice to *Yersinia* F1 genetic vaccine are overcome by boosting with F1 polypeptide while outbred mice remain nonresponsive J Immunol 161 4195-4200

Byrne MP, TJ Smith, VA Montgomery, LA Smith 1998 Purification, potency, and efficacy of the botulinum neurotoxin type A binding domain from *Pichia pastoris* as a recombinant vaccine candidate Infect Immun 66 4817-4822

Connolly BM, KE Steele, KJ Davis, TW Geisbert, WM Kell, NK Jaax, PB Jahrling 1999 Pathogenesis of experimental Ebola virus infection in guinea pigs J Infect Dis 179(Suppl 1) S203-217

Eitzen EM Jr 1999 Education is the key to defense against bioterrorism Editorial Ann Emerg Med 34 221-223

Cieslak TJ, Eitzen EM 1999 Clinical and epidemiological principles of anthrax Emerg Infect Dis 5 552-555

Friedlander AM 1999 Clinical aspects, diagnosis and treatment of anthrax J Appl Microbiol 2 203

Friedlander AM, PR Pittman, GW Parker 1999 Anthrax vaccine evidence for safety and efficacy against inhalational anthrax JAMA 22 2104-2106

Fritz DL, P Vogel, DR Brown, DM Waag. 1999. The hamster model of intraperitoneal *Burkholderia mallei* (Glanders). Vet Pathol 36:276-291.

Hale ML, BG Stiles. 1999. Detection of *Clostridium perfringens* alpha toxin using a capture antibody ELISA. Toxicon 37:471-484.

Hevey M, D Negley, P Pushko, J Smith, A Schmaljohn. 1998. Marburg virus vaccines based upon alphavirus replicons protect guinea pigs and nonhuman primates. Virology 251:28-37.

Hodgson LA, GV Ludwig, JF Smith. 1999. Expression, processing, and immunogenicity of the structural proteins of Venezuelan equine encephalitis virus from recombinant baculovirus vectors. Vaccine 17:1151-1160.

Jahrling PB, TW Geisbert, JB Geisbert, JR Swearengen, M Bray, NK Jaax, JW Huggins, JW LeDuc, CJ Peters. 1999. Evaluation of immune globulin and recombinant interferon-α2b for treatment of experimental Ebola virus infections. J Infect Dis 179 Suppl 1:S224-234.

Krakauer T. 1999. Induction of CC chemokines in human peripheral blood mononuclear cells by staphylococcal exotoxins and its prevention by pentoxifylline. J Leuk Biol 66:158-164.

Krakauer T. 1999. Immune response to staphylococcal superantigens. Immunol Res 20:163-173.

Krakauer T, BG Stiles. 1999. Pentoxifylline inhibits superantigen-induced toxic shock and cytokine release. Clin Diag Lab Immunol 6:594-598.

Lebeda FJ, MA Olson. 1998. Predictions of secondary structure and solvent accessibility of the light chain of the clostridial neurotoxins. J Nat Toxins 7:227-238.

Lebeda FJ, MA Olson. 1999. Prediction of a conserved, neutralizing epitope in ribosome-inactivating proteins. Int J Biol Macromol 24:19-26.

Lebeda FJ, BR Singh. 1999. Membrane channel activity and translocation of tetanus and botulinum neurotoxins. J Toxicol, Toxicol Rev 18:45-76.

Little SF, BE Ivins. 1999. Molecular pathogenesis of *Bacillus anthracis* infection. Microbes Infect 2:131-139.

Oberste MS, M Fraire, R Navarro, C Zepeda, ML Zarate, GV Ludwig, JF Kondig, SC Weaver, JF Smith, R Rico-Hesse. 1998. Association of Venezuelan equine encephalitis virus subtype IE with two equine epizootics in Mexico. Am J Trop Med Hyg 59:100-107.

Oberste MS, SM Schmura, SC Weaver, JF Smith. 1999. Geographic distribution of Venezuelan equine encephalitis virus subtype IE genotypes in Central America and Mexico. Am J Trop Med Hyg 60:630-634.

Olson MA. 1998. Mean-field analysis of protein-protein interactions. Biophys Chem 75:115-128.

Olson MA, L Cuff. 1998. Free energy determinants of binding the rRNA substrate and small ligands to the active site of ricin A-chain. Biophys J 76:28-39.

Pitt ML, S Little, BE Ivins, P Fellows, J Boles, J Barth, J Hewetson, AM Friedlander. 1999. *In vitro* correlate of immunity in an animal model of inhalational anthrax. J Appl Microbiol 2:304.

Schmaljohn CS, Y Cui, S Kirby, D Pennock, K Spik. 1999. Production and characterization of human monoclonal antibody Fab fragments to vaccinia virus from a phage display combinatorial library. Virology 258:189-200.

Smith LA. 1998. Development of recombinant vaccines for botulinum toxin. Toxicon 36:1539-1548.

Stiles BG, YG Campbell, RM Castle, SA Grove. 1999. Correlation of temperature and toxicity in murine studies with staphylococcal enterotoxins, and toxic shock syndrome toxin 1. Infect Immun 67:1521-1525.

Turell MJ. 1999. Vector competence of three Venezuelan mosquitoes (Diptera Culicidae) for an epizootic IC strain of Venezuelan equine encephalitis virus. J Med Entomol 36:407-409.

Turell MJ, J Barth, R Coleman. 1999. Potential for Central American mosquitoes to transmit epizootic and enzootic strains of Venezuelan equine encephalitis virus. J Am Mosq Contr Asso 15:295-298.

Turell MJ, GV Ludwig, J Kondig, JF Smith. 1999. Limited potential for mosquito transmission of genetically engineered, live-attenuated Venezuelan equine encephalitis virus vaccine candidates. Am J trop Med Hyg 60:1041-1044.

Worsham PL, MR Sowers. 1999. Isolation of an asporogenic (*spoOA*) protective antigen-producing strain of *Bacillus anthracis*. Can J Microbiol 45:1-8.

Zaucha GM, MLM Pitt, J Estep, BE Ivins, AM Friedlander. 1998. The pathology of experimental anthrax in rabbits exposed by inhalation and cutaneous inoculation. Arch Pathol Lab Med 122:982-992.

Enclosure 2
USAMRIID Abstracts FY99
Form A, Part 2 (iii), Question 4, IX

Abstracts FY99

Azucenalagos LA, JS Spencer, PD Craw, EA Henchal, BC Courtney, FK Knauert 1999 Comparison of two paper-based methods, FTA® abd Schleicher & Schuell Isocode® cards, for the preparation of *Bacillus anthracis* DNA from vegetative cells and spores for PCR amplification Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, October

Bavari S, D Pless 1999 Mutations in MHC class II binding sites of bacterial superantigens accelerate their processing and presentation Submitted for presentation at the Keystone Symposium, Immunogenetics of Human Disease - MHC/TCR and Peptide, Taos, NM, March

Boles JW, S Bavari, E Torres, R Tammariello, R Ulrich, L Pitt, R LeClaire 1999 Effects of dose and schedule of recombinant staphylococcal enterotoxin b (SEB) vaccine on the toxicity of aerosolized SEB in the rhesus monkey model Submitted for presentation at the Conference on Dangerous Pathogens '99, September

Bray M E Thompson, JW Huggins 1998 Treatment of lethal Ebola infection in experimental animals with a single large dose of an antiviral drug Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, October

Bray M E Thompson, JW Huggins 1999 Treatment of lethal filovirus or orthopoxvirus infection in mice with one or more large doses of an S-adenosylhomocysteine hydrolase inhibitor Submitted for presentation at the Annual Meeting of the International Society for Antiviral Research, Jerusalem, Israel, March

Brown JE, L Smith 1998 Measurement of botulinum toxin antibody to recombinant fragment Hc by enzyme-linked immunosorbent assay (ELISA) Submitted for presentation at the Interagency Botulism Research Coordinating Committee (IBRCC) meeting, Fort Washington, PA, November

Coyne SR, PD Craw, JP Spencer, LA Azucenalagos, JD Teska, JW Ezzell, EA Henchal, FK Knauert 1999 A simplified method for preparing PCR amplifiable DNA from *Bacillus anthracis* spores and vegetative cells in soil samples Submitted for presentation at the 99th Annual Meeting of the American Society for Microbiology, Chicago, IL, May-June

Cuff L 1999 A free energy analysis of U1A small nuclear ribonucleoprotein and U1 RNA hairpin interactions identification of amino acid residues important for binding target RNA Submitted for presentation at the Annual Fort Detrick/NCI-FCRDC Spring Research Festival, Frederick MD, May

Eitzen EM Jr. 1998. Use of biological weapons by terrorists: medical perspectives. Submitted for presentation at the Annual Meeting of the Infectious Diseases Society of America, Denver CO, November.

Farchaus J, PL Worsham, JK Pullen, L Smith, S Strachan, S Jendrek, W Ribot, B Loveless, SL Welkos, JJ Adamovicz. 1999. Production, purification, characterization and efficacy of the recombinant fusion protein F1-V from multiple expression systems. Submitted for presentation at the 99th Annual Meeting of the American Society for Microbiology, Chicago, IL, May-June.

Geisbert TW, TR Gibb, LE Hensley, KE Steele, NK Jaax, PB Jahrling. 1999. Apoptosis-induced in vivo during infection by Ebola and Marburg viruses. Submitted for presentation at the International Congress of Virology, Sydney, Australia, August.

Hart MK, M Azarion, P Pushko, GV Ludwig, R Bakken, JF Smith. 1999. VEE virus replicons expressing influenza HA gene protect alphavirus-immune mice from intranasal challenge. Submitted for presentation at the 10th International congress of Mucosal Immunology, Amsterdam, The Netherlands, June-July.

Henchal EA, MS Ibrahim, CA Rossi, FK Knauert, BC Courtney, JW Ezzell, G Ludwig, MA Northrup. 1998. Deployable methods for identification of classical biological warfare agents. Submitted for presentation at the Joint Workshop on Standoff Detection for Chemical and Biological Defense, Williamsburg, VA, October.

Hevey M, D Negley, P Pushko, JF Smith, A Schmaljohn. 1998. Protection of guinea pigs and nonhuman primates from Marburg virus with an *Alphavirus* replicon-based vaccine. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, October.

Hines HB, EE Bruegemann, F Zebeda. 1999. Limited proteolysis of ricin A chain. Submitted for presentation at the Pittsburgh Conference, Orlando, FL, March.

Hoover TA. 1999. *Bacillus anthracis* pX02 origin of replication: homogeneity among strains and relationship to the *Bacillus thuringiensis* pAW63 origin of replication. Submitted for presentation to the 2nd International Workshop on the Molecular Biology of *Bacillus cereus*, *Bacillus anthracis* and *Bacillus thuringiensis*, Taos, NM, August.

Huggins JW, MJ Martinez, D Smee, M Bray, S Hatfill. 1999. The DNA polymerase inhibitor Cidofovir (HPMPC) is a potential antiviral therapeutic agent for the treatment of smallpox and monkeypox infections. Submitted for presentation at the International Congress of Virology, Sydney, Australia, August.

Ibrahim MS, M Shipley, JA Higgins, J Ezzell, EA Henchal. 1998. Detecting biological agents by using probe-based PCR assays. Submitted for presentation at the Scientific Conference on Chemical and Biological Defense Research, Aberdeen Proving Ground, MD, November.

Jones TH, D Moss, C Rossi, B Peters, EA Henchal. 1998. The growth of Ebola Zaire in bat lung fibroblasts. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene. San Juan, Puerto Rico, October.

Kende M, C Yan, J Hewetson, J Loving, M Frick, R Tammariello, J Kokes, A Assaad. 1999. Enhancement of ricin toxoid (RT) efficacy in rats by poly(lactide-co-glycolide (PLG) microspheres. Submitted for presentation at the 26th International Symposium on Control Release of Bioactive Materials, Boston, MA, June.

Knauert FK, PC Craw, JP Spencer, LC Azucenalagos, EA Henchal, BC Courtney. 1998. Evaluation of procedures for preparing *Bacillus anthracis* DNA for PCR. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene. San Juan, Puerto Rico, October.

Korch GW Jr. 1998. A review of present and future research efforts in viral diseases at the U. S. Army Medical Research Institute of Infectious Diseases. Submitted for presentation at the 5th Biological Defense Conference of the Federal Ministry of Defense, Federal Armed Forces Medical Academy, Munich, Germany, October.

Kunakorn J, J Lee, J Smith, P Pushko, MT Dertzbaugh. 1999. Development of a botulinum neurotoxin serotype A vaccine using the VEE virus replicon system. Submitted for presentation at the Annual Fort Detrick/NCI-FCRDC Spring Research Festival, Frederick, MD, May.

Lee JS, MD Parker, P Pushko, MT Dertzbaugh, LA Smith, JF Smith. 1999. Safety aspects of the Venezuelan equine encephalitis (VEE) virus replicon expressing the C fragment of botulinum neurotoxin as a candidate vaccine for botulism.

Lee JS, MD Parker, P Pushko, MT Dertzbaugh, L Smith, JF Smith. 1999. Immune responses and efficacy against botulinum neurotoxin challenge after vaccination with non-toxic subunits of botulinum neurotoxin expressed from the Venezuelan equine encephalitis virus replicon. Submitted for presentation at the XIth International Congress of Virology Sydney, Australia, August.

Lee JS, MD Parker, P Pushko, MT Dertzbaugh, S Welkos, J Farchaus, RG Ulrich, JF Smith. 1998. Construction of candidate vaccines for staphylococcal enterotoxin A and B, botulinum neurotoxin type A, and *Bacillus anthracis* using a generic vaccine vector system derived from Venezulan equine encephalitis virus RNA replicons. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene. San Juan, Puerto Rico, October.

Lesher MD, AS Khan, RG Ulrich. 1999. Momocyte and CD3+ dendritic cells exhibit distinct profiles of cytokine-induced gene expression. Submitted for presentation at the Annual Meeting of the American Association of Immunologists, Washington DC, April.

Ludwig GV. 1999. USAMRIID's role as a component of the Military Public Health Laboratory system: an historical perspective. Submitted for presentation to the organizers of the Military Public Health Laboratory Symposium, September.

Ludwig GV, MD Parker, RJ Schoepp, C Lind, JF Smith. 1998. Evaluation of candidate vaccines for WEE. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, October.

Mellon SJ, PB Jahrling, MS Ibrahim. 1998. Whole genome analysis of orthopoxviruses by numerical taxonomy. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, October.

Pifat DY. 1998. Assay validation and clinical trials: what regulations apply? Submitted for presentation (invited speaker) at the IBC Conference, Second International Vaccine Regulatory Summit, Miami, FL, November-December.

Pushko P, M Bray, G Ludwig, M Parker, A Sanchez, A Schmaljohn, P Jahrling, J Smith. 1999. Mono- and bivalent vaccines based on the replicon of attenuated alphavirus protect against Lassa and Ebola hemorrhagic fever viruses. Submitted for presentation at the XIth International Congress of Virology, Sydney, Australia, August.

Roberts BA, SRM Ramsey, DY Pifat. 1999. Method validation: assay of anti-Venezuelan equine encephalitis virus neutralizing antibodies by plaque-reduction neutralization test (PRNT). Submitted for presentation at the Annual Fort Detrick/NCI-FCRDC Spring Research Festival, Frederick, MD, May.

Saikh KU, AS Khan, MD Lesher, RG Ulrich. 1999. Antigen presentation by a unique CD33+ dendritic cell is controlled by a limited burst of HLA-DR expression that is prolonged by TNF and inhibited by IL-10. Submitted for presentation at the Annual Meeting of the American Association of Immunologists, Washington DC, April.

Shirley M, JA Higgins, EA Henchal, MS Ibrahim. 1998. Probe-based PCR assays for *Brucella* spp. Submitted for presentation at the 47th Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, October.

Smee DF, JW Huggins. 1999. Inhibitors of wild-type and cidofovir-resistant strains of camelpox, cowpox, monkeypox, and vaccinia viruses. Submitted for presentation at the Annual Meeting of the International Society for Antiviral Research, Jerusalem, Israel, March.

Smee DF, JW Huggins. 1999. Mode of action of ribavirin against cowpox and monkeypox viruses. Submitted for presentation at the Annual Meeting of the International Society for Antiviral Research, Jerusalem, Israel, March.

Steele KE, AJ Davis, K Stephan, W Kell, P Vogel, MK Hart. 1999. Neurovirulence and tissue tropism of wild-type and attenuated strains of Venezuelan equine encephalitis virus in mice. Submitted for presentation at the Keystone Symposium: Infections of the Nervous System: Host-Pathogen Interactions, Taos, NM, March.

Stutler JW, JJ Ezzell, W Bryden, PA Demirev, Y Hathout, J Jackman. 1999. Analysis of intact *Bacillus anthracis* spores by using MALDI-TOF MS: characterization of interspecies similarities Submitted for presentation at the American Society for Mass Spectrometry, Dallas, TX, June

Stutler SA 1999 Use of a standardized protocol format in Department of Defense biomedical research laboratories Submitted for presentation at the 1999 Annual Meeting of the American Veterinary Medical Association, New Orleans, LA, July

Thompson WL, DJ Abplanalp, R Aguirre, SF Little 1999 Development and validation of a method for detection and assay of neutralizing antibodies to *Bacillus anthracis* Submitted for presentation at the Annual Fort Detrick/NCI-FCRDC Spring Research Festival, Frederick, MD May

Van Meter CJ, MT Dertzbaugh 1999 Genetic fusion of plague antigens to cholera toxin Submitted for presentation at the 10th International Congress of Mucosal Immunology, Amsterdam, The Netherlands, June-July

Wannemacher RW, RE Dinterman, GM Zaucha, JW Boles 1999 Safety and efficacy of deglycosylated A-chain of ricin (DGCA-ricin) vaccine for the protection against aerosolized ricin Submitted for presentation at the 38th Annual Meeting of the Society for Toxinology, New Orleans, LA, March

Welkos SL, A Friedlander, P Fellows, S Little, J Schmidt 1999 The role of humoral immunity to *B. anthracis* and anthrax toxin in inhibiting the early stages of infection by anthrax spores Submitted for presentation at the 99th Annual Meeting of the American Society for Microbiology, Chicago, IL, May-June

Wenzlick DW, J Jackman, JW Ezzell, EA Henchal 1999 Inactivation of infectious materials by [illegible]-radiation causes loss of MALDI/TOF-MS signals Submitted for presentation at the American Society for Mass Spectrometry, Dallas, TX, June

Xiang C, H Young, H Alterson, D Reynolds, M Bittner, Y Chen, G Gooden, Y Jiang, P Meltzer, J Trent, J Mikovits, K Anderson 1999 Comparison of cellular gene expression in Ebola-Zaire- and Ebola-Reston virus-infected primary human monocytes Submitted for presentation at the Nature Genetic Microarray Meeting, Mountain Shades Marriott Resort, Scottsdale, AR, September

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Engineer Research and Development Center
Structures Laboratory
Structural Mechanics Division

2. **Where is it located?**

Address: 3909 Halls Ferry Road
Vicksburg, MS 39180

Geographical Location: Vicksburg is located on the Mississippi River in the west-central region of the state of Mississippi *

* NOTE: Other research programs unrelated to biological warfare defense are conducted at this facility. The following data is for Collateral Effects Program efforts performed at this facility.

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	N/A
BL2 (sqM)	N/A
BL3 (sqM)	N/A
BL4 (sqM)	N/A
Total	N/A

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 5*

* NOTE: The following personnel are the estimated man-years dedicated to the biological component of this effort.

II. **Division of personnel**

Military	0
Civilian	5

III. Division of personnel by category:

Scientists	0
Engineers	2
Technicians	3
Admin. and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff:

Civil Engineering
Mechanical Engineering

V. Are contractor staff working in the facility?

Yes. Number: 5 (work on-site approximately one month of the year)

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (partly)

VII. What are the funding levels for the following program areas:

	FY 99 Funding Levels
Research	$ 0
Development	$ 0
Advanced Development	$1,200,000
Target Production	$ 0
Total	$1,200,000*

* NOTE: Approximately 30% of total allocated for contractor support

VIII. Briefly describe the publication policy of the facility:

The results of all technical programs are documented in technical reports for official government use o

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

"Experimental Response of Water-Filled Containers Near a Cased Detonation", 70th Shock and Vibration Symposium

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. **Objectives:**

Study the collateral effects of penetrating conventional weapons on underground and aboveground biological or chemical model storage facilities.

II. **Agents:**

Tracers include:

Biological simulants:
Kaolin
Bacillus thuringiensis

III. **Outdoor Studies:**

Tests were conducted to study the effects of penetrating weapons on containers of simulated agent and the resulting expulsion plumes. The studies obtained video data on the plume geometries, and the properties of the expulsion jet and plume.

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

U.S. Army Medical Research Institute of Chemical Defense

2. **Where is it located?**

Address:
U.S. Army Medical Research Institute of Chemical Defense
3100 Ricketts Point Road
Aberdeen Proving Ground, MD 21010-5425

Geographical Location: Approximately 20 miles northeast of Baltimore, MD

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	220
BL2 (sqM)	412
BL3 (sqM)	0
BL4 (sqM)	0
Total (sqM)	632

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 7

II. **Division of personnel:**

Military	0
Civilian	7

III. **Division of personnel by category:**

Scientists	3
Engineers	0
Technicians	4
Admin. and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff:

Biology
Physiology
Pharmacology
Biochemistry

V. Are contractor staff working in the facility?

Yes. Number: 1

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (wholly)

VII. What are the funding levels for the following program areas:

	FY99 Funding Levels
Research	$ 899,000
Development	$ 178,000
Advanced Development	$ 270,000
Total	$ 1,347,000

VIII. Briefly describe the publication policy of the facility:

Publications are to be prepared in accordance with AR 360-5
(Army Regulations Manual - unclassified format manual)

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

See enclosure 1 (USAMRICD publications)

5. Briefly describe the biological defense work carried out at the facility, type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Since 1988, an element of the Institute's mission has involved the performance of basic research on medical defenses against neurotoxins. This work concerns the pathophysiological mechanisms and effects of toxins of biological origin and proposed pharmacological pretreatment and/or therapeutic regimens. Neurotoxins of biological origin (botulinum toxin, saxitoxin, and tetrodotoxin) have been the primary targets of research interest. These studies have advanced our knowledge of the basic mechanisms of action of these toxins and of compounds that have been identified as having a potential for prophylaxis and therapy against them. USAMRICD has not participated in medical biological defense development efforts that would involve the administration of candidate drugs or vaccines to human research subjects in clinical trials.

USAMRICD has not participated in medical biological defense development efforts that would involve the administration of candidate drugs or vaccines to human research subjects in clinical trials.

USAMRICD does not conduct any programs that fall under the formal U.S. Army definition of "testing."

II. Agents:

Botulinum toxin

III. Outdoor studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Encl 1
USAMRICD Publications
Form A 2 (iii) Question 4, IX

U.S. Army Medical Research Institute of Chemical Defense 1999 Publications

Adler, Michael, Schafer, Harlan, Hamilton, Tracey, Petrali, John P. Cytotoxic actions of the heavy metal chelator TPEN on NG108-15 neuroblastoma-glioma cells. NeuroToxicology, 20(4), 571-582, 1999.

Adler, Michael, Keller, James E., Baskin, Steven I., Salem, Harry, Filbert, Margaret G., Romano, James A., Jr. Promising new approaches for treatment of botulinum intoxication. Journal of Applied Toxicology 19 (S1), S3-S4, 1999.

Adler, Michael, Nicholson, James D., Starks, D.F., Kane, C.T., Cornille, F., Hackley, Brennie E., Jr. Evaluation of phosphoramidon and three synthetic phosphonates for inhibition of botulinum neurotoxin B catalytic activity. Journal of Applied Toxicology 19 (S1), S5-S11, 1999.

Adler, Michael, Lebeda, Frank J., Kauffman, Frederick C., and Deshpande, Sharad S. Mechanism of action of sodium cyanide on rat diaphragm muscle. Journal of Applied Toxicology 19, 411-419, 1999.

Apland, James P., Biser, Jennifer A., Adler, Michael, Ferrer-Montiel, A.V., Montal, M., Filbert, Margaret G. Peptides that mimic the carboxy-terminal domain of SNAP-25 block acetylcholine release at an Aplysia synapse. Journal of Applied Toxicology, 19(S), S23-S26, 1999.

Doebler, Jeffrey A. Membrane potential and resistance changes in NG108-15 cells: An in vitro model to study membrane-active compounds. Toxicology Methods, 9, 35-45, 1999.

Keller, James E., Neale, Elaine A., Oyler, George, Adler, Michael. Persistence of botulinum neurotoxin action in cultured spinal cord cells. FEBS Letters, 456, 137-142, 1999.

Keller, James E., Nowakowski, Janet L., Filbert, Margaret E., Adler, Michael. Rapid microplate assay for monitoring botulinum neurotoxin B catalytic activity. Journal of Applied Toxicology, 19(S), S13-S17, 1999.

Ray, P., Ishida, H., Millard, Charles B., Petrali, J.P., Ray, R. Phospholipaise A2 and arachidonic acid-mediated mechanism of neuroexocytosis: a possible target of botulinum neurotoxin A other than SNAP-25. Journal of Applied Toxicology, 19(S), S27-S28, 1999.

Sheridan, Robert E., Deshpande, Sharad S., Smith, Theresa. Comparison of in vivo and in vitro mouse bioassays for botulinum toxin antagonists. Journal of Applied Toxicology, 19(S), S29-S33, 1999.

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Walter Reed Army Institute of Research

2. **Where is it located?**

Address: Walter Reed Army Institute of Research
Washington, DC 20307-5100 [Old address]

[Note: WRAIR recently moved into a new facility and this move will be reflected in the 2000 CBM. The old facility is no longer in use. The new is 503 Robert-Grant Road, Silver Spring, MD 20910. The date of dedication of this building was October 5, 1999]

Geographical Location: Northwest quadrant of the District of Columbia

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	0
BL2 (sqM)	1808.6
BL3 (sqM)	0
BL4 (sqM)	0
Total (sqM)	1808.6

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 37

II. **Division of personnel:**

Military	14
Civilian	23

III. **Division of personnel by category:**

Scientists	23
Engineers	0
Technicians	11
Admin. and Support Staff	3

IV. List the scientific disciplines represented in the scientific/engineering staff:

Biochemistry
Biology
Chemistry
Experimental Psychology
Immunology
Infectious Disease
Medical Pathology
Microbiology
Pharmacology
Physiology
Veterinary Pathology

V. Are contractor staff working in the facility?

Yes Number 19

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (wholly)

VII. What are the funding levels for the following program areas:

	FY99 Funding Levels
Research	$1,500,000
Development	$2,237,000
Test and Evaluation	$0
Total	$3,737,000

VIII. Briefly describe the publication policy of the facility:

This laboratory supports and encourages scientists to publish and present their results in the open scientific literature and at scientific meetings. Technical papers receive in-house peer review before the article is submitted for publication. AR 360-5 gives guidance for the clearance of biological defense publications.

IX. Provide a list of publicly available papers and reports resulting form work during the previous 12 months.

See Enclosure 1 (WRAIR Publications)

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. Objectives:

a. Analysis of infectious processes and intoxications caused by infectious microorganisms or toxins and the immune following infections or intoxications in animal models.

b. Development of effective vaccines, small molecules, and peptide inhibitors or other preventive measures to prevent infections or intoxication caused by potential biological warfare agents.

c. Rapid identification of infections or intoxication in patients to aid in prophylaxis/treatment.

d. Determine the biochemical mechanism of action for threat toxins.

II. Agents:

Staphylococcal enterotoxin B
Botulinum toxins A and B
Brucella spp
Yersinia pestis
Francisella tularensis
Rickettsia prowazekii

III. Outdoor studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Enclosure 1
WRAIR, Publications
Form A 2 (iii) Question 4, IX

Bhattacharjee AK, Young LD, Yuan L, Zollinger WD and Hoover DL Intranasal immunization of Rhesus Monkeys with Brucella melitensis lipopolysaccharide non-covalently complexed with Neisseria meningitidis group B outer membrane protein 52nd Annual Brucellosis Conference, November 6-7, 1999, Chicago, IL (Abstract)

Borschel R, Mense M, Nikolich M, Pitt L, Bhattacharjee A, Boles J, Stutler S, and Hoover D A comparison of Brucella melitensis strain 16M to strain WR201 given by gavage at a dose of $1X10^{12}$ organisms 52nd Annual Brucellosis Conference, November 6-7, 1999, Chicago, Il (Abstract)

Ching, W-M , H Wang, and G A Dasch 1999 Identification and characterization of linear epitopes recognized by mouse monoclonal antibodies on the surface protein antigen of Rickettsia prowazekii, p 16-22 In D Raoult and P Brouqui (ed) Rickettsiae and Rickettsial Diseases at the Turn of the Third Millenium Elsevier, Paris, France

Ching, W -M , H Wang, and G A Dasch 1999 Sera from human cases of typhus compete with mouse monoclonal antibodies recognizing different conformational epitopes for binding to S-layer protein antigens Am Soc Microbiol 99th Annual Meeting Abstract

Ching, W-M , H Wang, and G A Dasch 1999 Identification and characterization of linear epitopes recognized by mouse monoclonal antibodies on the surface protein antigen of Rickettsia prowazekii International Conference on Rickettsiae and Rickettsial Diseases & 14th American society for Rickettsiology 14th Sesquiannual Joint Meeting 13-16 June 1999, Marseille, France

Das R, Chanaka Mendis, Zhengyin Yan, Roger Neill, Thomas Boyle and Marti Jett Alterations in Gene Expression Show Unique Patterns in Response to Toxic Agents Army Science Conference Nov 1998

Das R, Neill R, Yang D, Jett M (1999) Characterization of Gene Alterations in the Host Response to Toxic Agents Defense Advanced Research Projects Agency Proceedings Monterey, CA Feb 1999

Dasch, G A , A L Bourgeois, and F M Rollwagen 1999 The surface protein antigen of Rickettsia typhi in vitro and in vivo immunogenicity and protective efficacy in mice, p 116-122 In D Raoult and P Brouqui (ed) Rickettsiae and Rickettsial Diseases at the Turn of the *Third Millenium Elsevier, Paris, France*

Dasch, G A , A L Bourgeois, and F M Rollwagen 1999 The surface protein antigen of Rickettsia typhi in vitro and in vivo immunogenicity and protective efficacy in mice International Conference on Rickettsiae and Rickettsial Diseases & 14th American society for Rickettsiology 14th Sesquiannual Joint Meeting 13-16 June 1999, Marseille, France

Fegeding K et al: Expression of chemokines in the lung of mice intoxicated with staphylococcal enterotoxin B. (Abstracted in Experimental Biology'99, April 17-21, 1999, Washington, DC).

Fernandez-Prada C, Tall BD, Elliott SE, Hoover DL, Nataro JP, Venkatesan MM. Hemolysin-positive enteroaggregative and cell-detaching Escherichia coli strains cause oncosis of human monocyte-derived macrophages and apoptosis of murine J774 cells. Infect Immun 1998; 66:3918-24

Gordon, R.K., Moorad, D.R., Doctor, B.P., Garcia, G.E. QSAR of Buforin Analogs: Peptide Inhibitors of Botulinum Toxin. International Conference 1999: Basic and Therapeutic Aspects of Botulinum and Tetanus Toxins. Orlando FL 11/99. Abstract ID: 4910

Gregory E. Garcia, Deborah R. Moorad, and Richard K. Gordon Buforin I, a Natural Peptide, Inhibits Botulinum Neurotoxin B Activity *In Vitro* Journal of Applied Toxicology 19(S1), S19-S22, 1999

Hoover DL, Crawford RM, Van De Verg LL, Izadjoo MJ, Bhattacharjee AK, Paranavitana CM, Warren RL, Nikolich MP, Hadfield TL. Protection of mice against brucellosis by vaccination with Brucella melitensis WR201(16MDeltapurEK). Infect Immun 1999;67:5877-84

Ionin B, Foley J, Lee D, Boyle T, Das R and Jett M (1999). Differential gene expression pattern induced by staphylococcal enterotoxin B in human kidney cells. FASEB J. 13:A1407 (#443)

Ishida H, Berman JD, Ray P. Involvement of cytoskeleton in acetycholine neuroexocytosis and its inhibition by botulinum toxin in PC12 cells. FASEB 1999 [abstract]

Izadjoo MJ, Bhattacharjee AK, Paranavitana CM, Hadfield TL and Hoover DL. Oral immunization with Brucella melitensis WR201 and its protective efficacy against challenge with virulent Brucella melitensis 16M. 52nd Annual Brucellosis Conference, November 6-7, 1999, Chicago, IL (Abstract).

Komisar J et al: Failure of cyclosporin A to protect rhesus monkeys against staphylococcal enterotoxin induced toxic shock. (Abstracted in Experimental Biology'99; April 17-21, 1999, Washington, DC.)

Lindler LE, Plano GV, Burland V, Mayhew GF, Blattner FR. Complete DNA sequence and detailed analysis of the Yersinia pestis KIM5 plasmid encoding murine toxin and capsular antigen. Infect Immun 1998; 66:5731-42

Mendis C, Yang D, Jett M and Das R (1998). Identification Of Alterations In Gene Expression In Response To Staphylococcal Enterotoxin B (SEB) Using Differential Display, FASEB J. 12: Dec 98

Richards, A. L., S. Ratiwayanto, H. Hadiputranto, E. Rahardjo, J. G. Olson, M. J. Bangs, D.J. Fryauff, J. Jenkins, D. J. Kelly, and G. A. Dasch. 1999. Evidence for infection with Rickettsia and Rickettsia-like agents among residents of Gag Island, Indonesia. Am. Soc. Microbiology 99th Annual Meeting Abstract.

Temenak, J. J., W. M. Nelson, G. A. Dasch, and D. J. Kelly. 1999. Rapid detection of typhus and spotted fever group rickettsiae with a 5-fluorogenic nuclease assay. Am. Soc. Microbiol. 99th Annual Meeting Abstract.

Weng Ching-feng, Wei Zhao, Konstantin V. Fegeding, Jack L. Komisar, and Jeenan Tseng: Resistance of staphylococcal enterotoxin B-induced proliferation and apoptosis to the effects of dexamethasone in mouse lymphocyte cultures. International Immunol.11:787-801 (1999)

Yan Z., Yang D, Jett M (1999). SEB and Cholera Toxin Induce TNF-α production by human monocytes via cAMP Independent pathways. Molecular Biology and Biochemistry Research Communications. 2:124-130.

PATENTS:

Provisional submittal May 17, 1999.; ABuforin as a specific inhibitor and therapeutic agent for botulinum toxin B and tetanus neurotoxins, Garcia, GE, Moorad, DR, Doctor, BP, Gordon, RK.

Provisional patent submitted May 17, 1999, Previns as specific inhibitors and therapeutic agents for Botulinum toxin B and Tetanus neurotoxins. Gordon RK, Moorad DR, Doctor BP, Garcia, GE.

Provisional patent submitted February 1999, Diagnosis of Exposure to Toxic Agents by Measuring Distinct Patterns in Levels of Expression of Specific Genes. Das R, Mendis C, Jett M

Form A: Part 2 (iii)
National Biological Defence Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Lothar Salomon Test Facility (LSTF), U.S. Army Dugway Proving Ground

2. **Where is it located?**

Address:
U.S. Army Dugway Proving Ground
ATTN: STEDP-WD-L
Dugway, UT 84022-5000

Geographical Location: West-central region of Utah, approximately 65 miles southwest of Salt Lake City, UT

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	0
BL2 (sqM)	600
BL3 (sqM)	340
BL4 (sqM)	0
Total (sqM)	940

4. **The organizational structure of each facility.**

I. Total number of personnel: 40

II. Division of personnel:

Military	0
Civilian	40

III. Division of personnel by category:

Scientists	30
Engineers	0
Technicians	6
Administrative and Support Staff	4

IV. **List the scientific disciplines represented in the scientific/engineering staff:**

Microbiology
Aerobiology
Toxicology
Biochemistry
Immunology
Veterinary Medicine

V. **Are contractor staff working in the facility?**

Yes Number 13

VI. **What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?**

Department of Defense (partly)

VII. **What are the funding levels for the following program areas:**

	FY99 Funding Levels
Research	$ 626K
Testing	$ 2 302M
Treaty Support	$ 85K
Counter Proliferation/Training	$ 126K
Total	$ 3 139M

VIII. **Briefly describe the publication policy of the facility:**

Lothar Salomon Test Facility (LSTF) is a service organization providing test support to materiel developers. The majority of data is produced in test reports are provided to the test sponsor. Work performed under test methodology development is published in open literature.

IX. **Provide a list of publicly available papers and reports resulting from work during the previous 12 months.**

See Enclosure 1 (Dugway publications)

5. **Briefly describe the biological defense work carried out at the facility, including *type(s) of microorganisms and/or toxins studied*, as well as *outdoor studies of biological aerosols*.**

I. Objectives:

Dugway Proving Ground (DPG) acts as the independent testing organization for biological defense systems developed by the Department of Defense (DoD). DPG's LSTF is neither a production nor a research laboratory, it is a test and evaluation activity. The principal workload for the facility's staff is to test battlefield detection and identification methods, protective equipment, and decontamination systems. New biological defense equipment is tested to ensure it will provide the requisite levels of protection. The test results produced at DPG are also used to accurately establish equipment functional limits. To fully test and evaluate equipment and systems, the staff conducts methodology development, nonmedical assessment of suspected biological threat agents and their impact, and operational testing of biological defense systems.

The staff challenges defense materiel using pathogens and toxins inside biological containment facilities within the LSTF. While harmless biological simulants are used in lieu of hazardous materials when feasible, test objectives cannot be met in all cases with simulants. Therefore, testing with pathogens and toxins is accomplished within the LSTF biological safety level 2/3 (BL-2/3) suites.

Outdoor testing with biological simulants is conducted to fully evaluate large pieces of biological defense equipment and systems, perform battlefield interferant testing of biological detectors and develop/validate aerosol particle dispersion models.

II. Agents:

Bacillus anthracis
Botulinum toxin
Brucella melitensis
Brucella suis
Brucella abortus
Brucella neotomae
Coxiella burnetii
Francisella tularensis
Francisella novicida
Ricin
Staphylococcal enterotoxins
Vibrio cholerae
Yersinia pestis
Yersinia enterocolitica
Yersinia pseudotuberculosis

Simulants

Aspergillus niger
Bacillus cereus
Bacillus megaterium
Bacillus subtilis var. niger
Bacillus thuringiensis
Erwinia herbicola
Escherichia agglomerans
Escherichia coli
Enterobacter agglomerans
Klebsiella pneumoniae
MS2 (bacteriophage)
Ovalbumin
Poliovirus (vaccine strain)
Pseudomonas acidophila
Pseudomonas aeruginosa
Staphylococcus aureus
Rotavirus (simian)
Vaccinia virus (Lister)

III. Outdoor studies:

Outdoor biological defense aerosol studies using simulants are conducted at this facility

Enclosure 1
U.S. Army Dugway Proving Ground, Publications
Form A 2 (iii) Question 4, IX

LIST OF PUBLICATIONS SINCE JANUARY OF 1999
(Prepared in January of 2000)

1. Andersen, D.O. and A.J. Mohr. January 1999. Abbreviated Test Report for the Reaerosolization Demonstration. TECOM Project No. 8-CO-160-000-043, DPG Document No. DPG-TR-99-001

2. Andersen, D.O. and A.J. Mohr. October 1999. Abbreviated Test Report for the Engineer Design Test of the Counterproliferation Long Range - Biological Standoff Detection System (CP LR-BSDS), XM94E1. TECOM Project No. 6-ES-685-RMT-034, DPG Document No. WDTC-TR-99-078

3. Bell, B.L., R.M. Miceli, L.M. Moore, S.L. Schanaman, K. Liljestrand, J. Varelman, R. Warren, J. Thermos, S. Parker, J.D. Wright, and B. Harper. December 1999. Data Report for the Joint Vaccine Acquisition Program (JVAP) of the *Francisella tularensis* Vaccine Project. Test Project No. 8-ES-205-JVP-001. WDTC Document No. WDTC-DR-99-101

4. Farrow, S.W., September 1999, Data Report for the Customer Test of the Biological Aerosol Warning System (BAWS), TECOM Project No. 8-CO-410-ATD-003, DPG Document No. WDTC-DR-99-059

5. Luo, S. and A.J. Mohr. January 11 1999. Abbreviated Test Report (Part IV) for the Chemical/Biological Mass Spectrometer (CBMS) Biological Profiling. TECOM Project No. 8-CO-410-000-048

6. Luo, S. and A.J. Mohr. March 1999. Abbreviated Test Report (Part V) for the Chemical/Biological Mass Spectrometer (CBMS) Biological Profiling. TECOM Project No. 8-CO-410-000-048

7. Luo S. and A.J. Mohr. July 1999. Abbreviated Test Report (Part I) for the Chemical/Biological Mass Spectrometer (CBMS) Block II Biological Profiling. TECOM Project No. 8-CO-410-000-062

8. Luo, S. and A.J. Mohr. December 1999. Abbreviated Test Report (Part II) for the Chemical/Biological Mass Spectrometer (CBMS) Block II Biological Profiling. TECOM Project No. 8-CO-410-000-062.

9. Luo, S., Mohr, A.J., Sickenberger, D., and Hryncewich, A. December 1999. Study of Purified Bacteria and Viruses by Pyrolysis Mass Spectrometry, Field Analytical Chemistry and Technology (FACT). Volume 3, Issue 6, pp 1-18

10. Miceli, R.M. and Bohannon, R. Report of Methodology for Rapid Polymerase Chain Reaction and Identification of Simulant Nucleic Acids Assay and Continuous Fluorescence Monitoring of Rapid Cycle DNA Amplification. TECOM Project No. 7-COR-97-DPS-002K4. WDTC-FR-99-018.

11. Setser, B. 1999. Data Report for the Customer Test to Develop M94 Long-Range Biological Standoff Detection System Quantification of Simulant Cloud. WDTC-TR-99-043.

12. Stites, F.L. and D.O. Andersen. November 1999. Data Report For Advanced Concept Technology Demonstration of The Joint Biological Remote Early Warning System (JBREWS), Test Project No. 8-ES-685-BWS-002, DPG Document No. WDTC-DR-99-088.

13. Stites, F.L. and C.M. Wheeler. August, 1999, Data Report for Y2K Compliance and Operational Readiness: Biological Field-Testing, DPG Document No. WDTC-DR-99-053.

14. Tsang, K. W. October 1999. Data Report For the Customer Test of Short-Range Biological Standoff Detection System Developmental Field-Test And Evaluation. DPG Document No. WDTC-TR-99-074.

15. Whitmer, J.D., Miceli, R.M., and Harper, B.G. January 1999. Rapid Isolation of Single-Chain (scFv) Antibodies against Protein and Viral Simulants Using Phage Display, I. Library Construction, Biopanning and M13-Linked scFv Isolation. TECOM Project No. 7-COR-97-DPS-0034K4. DPG Doc. No. FR 99004.

16. Winters, D.R., Martin, D.D., Harper, B.G., Thermos, J.N., Fowler, F.P., Newquist, D.L., and Schwedler, A.K. July 1999. Abbreviated Test Report for Joint Field Trials of Prototype Biological Detection Components and Systems, Phase V, Laboratory. TECOM Project No. 8-CO-410-000-059. WDTC-TR-99-011.

17. Wright, J. D. and D. Szarek. 1999. Data Report For the Production Verification Test (PVT) Of the Biological Detector (BD). Test Project No. 8-CO-410-000-045. DPG Document No. WDTC-FR-99-075.

18. Wright, J. D., D. Szarek, L. Larsen, and W. Rome. 1999. Data Report For The Production Prove-Out Test (PPT) For Biological Integrated Detector System (BIDS) Preplanned Product Improvement (P3I) Component Testing. Test Project No. 8-CO-410-000-036. DPG Document No. WDTC-DR-99-049

ENVIRONMENTAL ASSESSMENTS

RECORDS OF ENVIRONMENTAL CONSIDERATION
(Chronological Order)

1. Wheeler, J.H. 18 February 1999. Record of Environmental Consideration (REC) for Customer Test of Biological Agent Warning System (BAWS) Testing at U.S. Army Dugway Proving Ground. Utah. TECOM Project Number 8-CO-410-ATD-003.

2. Wheeler, J.H. 15 March 1999. Record of Environmental Consideration (REC) for Engineering Design Test for the XM94E1 Counter Proliferation Long-Range Biological Standoff Detection System (CP LR-BSDS) at U.S. Army Dugway Proving Ground. Utah. TECOM Project Number 8-ES-685-RMT-034.

3. Wheeler, J.H. 31 March 1999. Modification of Record of Environmental Consideration (REC) for Engineering Design Test for the XM94E1 Counter Proliferation Long-Range Biological Standoff Detection System (CP LR-BSDS) at U.S. Army Dugway Proving Ground. Utah. TECOM Project Number 8-ES-685-RMT-034.

4. Wheeler, J.H. 13 May 1999. Modification of Record of Environmental Consideration (REC) for Engineering Design Test for the XM94E1 Counter Proliferation Long-Range Biological Standoff Detection System (CP LR-BSDS) at U.S. Army Dugway Proving Ground. Utah. TECOM Project Number 8-ES-685-RMT-034.

5. Wheeler, J.H. 18 May 1999. Modification of Customer Test of Biological Agent Warning System (BAWS) Testing at U.S. Army Dugway Proving Ground. Utah. TECOM project number 8-CO-410-ATD-003.

6. Shipley, B.L. 28 June 1999. Record of Environmental Consideration (REC) for the Bradley Fighting Vehicle System - A3 (BFVS - A3). NBC Contamination Survivability (NBCCS) Production Verification Test (PVT) at U.S. Army Dugway Proving Ground (DPG). Utah. TECOM Project No. 1-VC-030-IFV-219.

7. Shipley, B.L. 16 August 1999. Record of Environmental Consideration (REC) for Joint Biological Remote Early Warning System (JBREWS). Advanced Concept Technology Demonstration (ACTD) at U.S. Army Dugway Proving Ground (DPG). Dugway. Utah. TECOM Project No. 8-ES-685-BWS-002.

8. Wheeler, J.H. 16 August 1999. Record of Environmental Consideration (REC) for Modular Aerial Spray System (MASS). Large Area Decontamination Demonstration at U.S. Army Dugway Proving Ground (DPG). Dugway, Utah. TECOM Project No. 8-CO-210-049-263.

9 Wheeler, J.H. 16 August 1999. Record of Environmental Consideration (REC) for Canteen Insert Water Purifier (CIWP) Microbial Reduction Test at U.S. Army Dugway Proving Ground (DPG), Dugway, Utah. TECOM Project No. 8-ES-225-CWP-002

10 Wheeler, J.H. 13 September 1999. Record of Environmental Consideration (REC) for Joint Biological Point Detection System (JBPDS) Mini Field Trials at U.S. Army Dugway Proving Ground, Utah. TECOM Project Number 8-ES-685-BDS-007

11 Wheeler, J.H. 14 September 1999. Record of Environmental Consideration (REC) for 1999 Trilateral Field Trials at U.S. Army Dugway Proving Ground, Utah. TECOM Project Number 8-CO-210-000-070

12 Wheeler, J.H. 29 September 1999. Record of Environmental Consideration (REC) for Joint Biological Remote Early Warning System (JBREWS) Live Agent Chamber Test at U.S. Army Dugway Proving Ground, Utah. TECOM Project Number 8-ES-685-BWS-004

13 Wheeler, J.H. 21 October 1999. Modification of Record of Environmental Consideration (REC) for the Defense Special Weapons Agency (DSWA), High Temperature Incendiary (HTI) Devices Test Support at U.S. Army Dugway Proving Ground (DPG), Dugway, Utah. TECOM Project No. 8-CO-410-TRA-001

14 Wheeler, J.H. 30 November 1999. Modification of Record of Environmental Consideration (REC) for the Detection of Culture Effluent/Battelle Pond Test at U.S. Army Dugway Proving Ground, UT. TRMS Number 9-CO-160-000-484

15 Wheeler, J.H. 30 November 1999. Record of Environmental Consideration (REC) for Comparison of Candidate Decontaminants for Biological Agents at U.S. Army Dugway Proving Ground, Utah. TECOM Project Number 8-CO-160-041

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

U.S. Army Edgewood Chemical and Biological Center (ECBC)

2. **Where is it located?**

Address:
Technical Director
U.S. Army Edgewood Chemical and Biological Center
Attn: AMSSB-RTD
E5183 Blackhawk Rd
Aberdeen Proving Ground, MD 21010-5424

Geographical location: Northeastern Maryland

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	1,267
BL2 (sqM)	532
BL3 (sqM)	0
BL4 (sqM)	0
Total(sqM)	1,799

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 278

II. **Division of personnel:**

Military	1
Civilian	277

III. **Division of personnel by category**

Scientists	154
Engineers	51
Technicians	28
Admin. and Support Staff	36
Computer Analysts and Specialists	9

IV. List the scientific disciplines represented in the scientific/engineering staff:

Aerospace Engineering
Bio Science
Biology
Biochemistry
Chemical Engineering
Chemistry
Computer Program Analysis
Computer Science
Electronic Engineering
General Engineering
Mathematics
Mechanical Engineering
Meteorology
Microbiology
Operations Research Analysis
Physics
Statistics
Toxicology

V. Are contractor staff working in the facility?

Yes, approximately, 116

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (wholly)

VII. What are the funding levels for the following program areas:

	FY99 Funding Levels
Research	$920,000
Development	$5,340,000
Testing and Evaluation	$5,667,000
Industrial Preparedness	$0
Total	$11,927,000

VIII. Briefly describe the publication policy of the facility:

ECBC publishes unclassified research and development work on biodefense forms readily available to the general public and sponsors the presentation of such work at national and international scientific meetings and conferences. Portions of the developmental work are published in an open forum as well. Exceptions to this policy are made for test results on proprietary items , some information obtained from foreign governments, information on technologies deemed to be critical to the national defense, information that could be useful for a terrorist or aggressor and administrative information on program planning and execution.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

See Enclosure 1 (ECBC publications)

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

ECBC's Biological Defense Program supports the development of non-medical defensive materiel against biological agents. Research, development and engineering efforts are ongoing at ECBC for methods of rapid detection, identification, decontamination and physical protection of/from biological threat agents.

Specific objectives for FY99 included investigation of UV fluorescence of biologicals; development of mass spectrometric database for bacteria; antibody development; aerobiology; immunoassay and DNA probe testing; light scattering by aerosol particles; and prediction modeling.

These efforts will significantly enhance our capability to detect, warn and protect personnel against biological threats.

The work is focused on the development of human and mouse phage displayed genetic libraries for the selection of recombinant antibody fragments. Recombinant anti-botulinum toxin antibody has been manufactured in bacterial fermentations.

II. Agents:

Bacteria/Rickettsia:

- Bacillus anthracis non-pathogenic and inactivated strains
- Brucella species (inactivated)
- Clostridium perfringens
- Coxiella burnetii (inactivated)
- E. coli (non-pathogenic and inactivated strains)
- Francisella tularensis (inactivated and avirulent)

- Burkholderia species (inactivated)
- Salmonella typhimurium (inactivated)
- Staphylococcus aureus (inactivated)
- Yersinia species (inactivated, non-pathogenic)

Viruses

- Rift Valley Fever virus (inactivated)
- VEE, EEE and WEE virus gamma irradiated (inactivated)
- Yellow fever virus (inactivated)

Toxins

- Aflatoxins
- Botulinum toxins various subtypes (inactivated and active)
- Charybdotoxin
- Cholera toxin type B
- Conotoxins
- Diptheria toxin
- Mycotoxins (T-2, HT-2)
- Pertussis toxin
- Ricin toxin (crude)
- Saxitoxin and Neosaxitoxin
- SEB and SEA toxin (crude and purified)
- Shiga toxin 1 and 2
- Snake venom toxins
- Spider toxin (Joro)
- Tetrodotoxin

Simulants for biodefense efforts

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Encl 1

ECBC Publications
Form A 2 (iii) Question 4, IX

Reports and Publications

ERDEC-CR-259 Advanced Signal Processing and Pattern Recognition for Passive Infrared Remote Sensors
October 1998
UNCLASSIFIED - public release
G.W. Small

ECBC-TR-558 Inhibition of PCR by Contaminants in Field Samples
December 1998
UNCLASSIFIED – public release
D.E. Menking, D.R. Einhaus, P.A. Emanuel, J.J. Valdes, S.K. Kracke

ECBC-SP-001 Proceedings of the Joint Services Workshop on Biological Mass Spectrometry
January 1999
UNCLASSIFIED – public release
S.R. Long, T. Krishnamurthy, A.P. Snyder

ECBC-CR-004 Measurements of the Ultraviolet Fluorescence Cross Sections and Spectra of Bacillus anthracis Simulants
May 1999
UNCLASSIFIED - public release
J.R. Stephens

ECBC-TR-018 Characterization of the Integrated Virus Detection System (IVDS) Using MS2 Bacteriophage
May 1999
UNCLASSIFIED - public release
C.H. Wick, D.M. Anderson, P.E. McCubbin

ECBC-CR-013 Development of Sucrose-Fermenting Escherichia coli K-12 Strains for Low-Cost Overproduction of Recombinant Proteins
June 1999
UNCLASSIFIED - public release
Z. Lengyel

ECBC-SP-004 Proceedings of the 1998 ECBC Scientific Conference on Chemical and Biological Defense Research, 17-20 November 1998
July 1999
UNCLASSIFIED - public release

D.A. Berg, Compiler

ECBC-TR-046 Evaluation and Modification of Plasmid DNA Purification Kits
July 1999
UNCLASSIFIED - public release
D.E. Menking, P.A. Emanuel, J.J. Valdes, S.K. Kracke

ECBC-TR-047 Test of Level B Suits – Protection Against Chemical and Biological Warfare Agents and Simulants: Executive Summary
July 1999
UNCLASSIFIED - public release
R.S. Lindsay

ECBC-TR-048 Test of Level B Suits to Challenge by Chemical and Biological Warfare Agents and Simulants: Summary Report
July 1999
UNCLASSIFIED - public release
R.S. Lindsay

ECBC-TR-054 Filtration Characteristics of MS2 Bacteriophage Using Various Molecular Weight Filters
August 1999
UNCLASSIFIED - public release
C.H. Wick, P.E. McCubbin

ECBC-TR-055 Removing Complex Growth Media from MS2 Bacteriophage Culture
August 1999
UNCLASSIFIED - public release
C.H. Wick, P.E. McCubbin

ECBC-TR-056 Characterization of MS2 Bacteriophage by IVDS Physical Counting Methodology
August 1999
UNCLASSIFIED - public release
C.H. Wick, P.E. McCubbin

ECBC-TR-057 Expression and Purification of Selenomethionyl Prolidase from Alternomonas spJD6.5
September 1999
UNCLASSIFIED – public release
T-C. Cheng, V.K. Rastogi, J.J. DeFrank, W.R. Ashman, V. Champagne

Title: Identification of Brucella by Ribosomal-Spacer-Region PCR and Differentiation of Brucella canis from Other Brucella spp. Pathogenic for Humans by Carbohydrate Profiles
Author(s): Fox KF; Fox A; Nagpal M; Steinberg P; Heroux K
Journal: Journal of Clinical Microbiology, 1998, V36, N11 (NOV), P3217-3222

Title: Generation of a Histidine-Tagged Antibotulinum Toxin Antibody Fragment in E-coli: Effects of Post-Induction Temperature on Yield and IMAC Binding-Affinity
Author(s): Bentley WE; Madurawe RD; Gill RT; Shiloach M; Chase TE; Pulliam-Holloman TR; Valdes JJ
Journal: Journal of Industrial Microbiology & Biotechnology, 1998, V21, N6 (DEC), P275-282

Title: Single-Shot Fluorescence Spectra of Individual Micrometer-Sized Bioaerosols Illuminated by a 351- or a 266-nm Ultraviolet Laser
Author(s): Pan YL; Holler S; Chang RK; Hill SC; Pinnick RG; Niles S; Bottiger JR
Journal: Optic Letters, 1999, V24, N2 (JAN 15), P116-118

Title: Cometabolic Degradation of Chlorophenols by Acinetobacter Species
Author(s): Kim MH; Hao OJ
Journal: Water Research, 1999, V33, N2 (FEB), P562-574

Title: Detection and Identification of Low-Mass Peptides and Proteins from Solvent Suspensions of Escherichia coli by High Performance Liquid Chromatography Fractionation and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry
Author(s): Dai YQ; Li L; Roser DC; Long SR
Journal: Rapid Communications in Mass Spectrometry, 1999, V13; N1, P73-78

Title: Liquid Chromatography Microspray Mass Spectrometry for Bacterial Investigations
Author(s): Krishnamurthy T; Davis MT; Stahl DC; Lee TD
Journal: Rapid Communications in Mass Spectrometry, 1999, V13, N1, P39-49

Title: Assessment of an Automated Solid Phase Competitive Fluoroimmunoassay for Benzoylecgonine in Untreated Urine
Author(s): O'Connell KP; Valdes JJ; Azer NL; Schwartz RP; Wright J; Eldefrawi ME
Journal: Journal of Immunological Methods, 1999, V225, N1-2 (MAY 27), P157-169

Title: Purification of MS2 Bacteriophage from Complex Growth Media and Resulting Analysis by the Integrated Virus Detection System (IVDS)
Author(s): Wick CH; McCubbin PE
Journal: Toxicology Methods, 1999, V9, P253-263

Title: Rapid Cleanup of Bacterial DNA from Field Samples
Author(s): Menking DE; Emanuel PA; Valdes JJ; Kracke SK
Journal: Resources Conservation & Recycling, 1999, V27, N1-2 (JUL), P179-186

Title: Biodegradation of Neutralized Sarin
Author(s): Zhang YF; Autenrieth RL; Bonner JS; Harvey SP; Wild JR
Journal: Biotechnology & Bioengineering, 1999, V64, N2 (JUL 20), P221-231

Title: Detection of Yersinia pestis Using Branched DNA
Author(s): Iqbal SS; Chambers JP; Brubaker RR; Goode MT; Valdes JJ
Journal: Molecular & Cellular Probes, 1999, V13, N4 (AUG), P315-320

Title: Chemical and Biological Aerosol Detection and Identification with Field Analytical Instrumentation
Author(s): Snyder AP
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P219-220

Title: Real-Time Measurement of Fluorescence Spectra from Single Airborne Biological Particles
Author(s): Hill SC; Pinnick RG; Niles S; Pan Y-L; Holler S; Chang RK; Bottiger J; Chen BT; Orr C-S; Feather G
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P221-239

Title: Bio-Aerosol Fluorescence Sensor
Author(s): Reyes FL; Jeys TH; Newbury NR; Primmerman CA; Rowe GS; Sanchez A
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P240-248

Title: Passive and Active Standoff Infrared Detection of Bio-Aerosols
Author(s): Gittens CM; Piper LG; Rawlins WT; Marinelli WJ; Jensen JO; Akinyemi AN
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P274-282

Title: Detection of Biological Aerosols by Luminescence Techniques
Author(s): Stopa PJ; Tieman D; Coon PA; Milton MM; Paterno D
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P283-290

Title: Applications of Flow Cytometry for the Detection and Characterization of Biological Aerosols
Author(s): Sincock SA; Kulaga H; Cain M; Anderson P; Stopa PJ
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P291-306

Title: Field Detection of Bacillus Spore aerosols with Stand-Alone Pyrolysis - Gas Chromatography - Ion Mobility Spectrometry
Author(s): Snyder PA; Maswadeh WM; Parsons JA; Tripathi A; Meuzelaar HLC; Dworzanski JP; Kim M-G
Journal: Field Analytical Chemistry and Technology, 1999, V3, N4-5 (OCT 25), P315-326

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Armed Forces Institute of Pathology

2. **Where is it located?**

Address:
Armed Forces Institute of Pathology
6825 16th St., N.W.
Bldg 54, CPS-M
Washington D.C. 20306-6000

Geographical location: North Central Washington D.C.

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	0
BL2 (sqM)	60.4
BL3 (sqM)	173.2
BL4 (sqM)	0
Total (sqM)	233.6

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 13

II. **Division of personnel:**

Military	6
Civilian	7

III. **Division of personnel by category:**

Scientist	8
Engineers	0
Technicians	5
Admin. and Support staff	0

IV. **List the scientific disciplines represented in the scientific/engineering staff:**

Microbiology
Immunology
Molecular Biology

V. **Are contractor staff working in the facility?**

Yes Number 7

VI. **What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?**

U.S. Department of Defense (partly)

VII. **What are the funding levels for the following program areas:**

	FY99 Funding Levels
Research	$590,000
Development	$220,000
Advanced Development	$0
Total	$810,000

VIII. **Briefly describe the publication policy of the facility:**

Publications are to be prepared in accordance with AR 360-5 (Army Regulations Manual - unclassified format manual)

IX. **Provide a list of publicly available papers and reports resulting from work during the previous 12 months.**

See enclosure 1 below

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. **Objectives:**

a. Culture of organisms for extraction of lipopolysaccharide, proteins, and DNA for immunologic and molecular biology studies to develop component vaccine products, to define important proteins in immune responses, define proteins for rapid identification, define biomarkers for use in rapid detection, and animal studies to evaluate efficacy of component and live bacterial vaccine candidates.

b Provide collaborative facilities with killed suspensions of bacterial agents.

II. Agents:

Brucella melitensis	VEE
Brucella abortus	Yellow Fever
Brucella suis	
Francisella tularensis	
Vibrio cholera	
Bacillus anthracis	
Yersinia pestis	

III. Outdoor studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Encl 1
AFIP, Publications
Form A, Part 2 (iii), Question 4, IX.

Publications:

1. Eze MO, Yuan L, Crawford RM, Paranavitana CM, Hadfield TL, Bhattacharjee AK, Warren RL, Hoover DL. Effects of opsonization and gamma interferon on growth of brucella melitensis 16M in mouse peritoneal macrophages In vitro
   Infect Immun. 2000 Jan;68(1):257-63

2. Beverly MB, Vorhees KJ, Hadfield TL. Direct mass spectrometric analysis of Bacillus spores. Rapid Commun Mass Spectrom. 1999 Dec 15;13(23):2320-2326

3. Hoover DL, Crawford RM, Van De Verg LL, Izadjoo MJ, Bhattacharjee AK, Paranavitana CM, Warren RL, Nikolich MP, Hadfield TL. Protection of mice against brucellosis by vaccination with Brucella melitensis WR201(16MDeltapurEK)
   Infect Immun. 1999 Nov;67(11):5877-84

4. Beverly MB, Basile F, Vorhees KJ, Hadfield TL. The effects of electron and chemical ionization modes on the MS profiling of whole bacteria. J Am Soc Mass Spectrom. 1999 Aug;10(8):747-58

5. McQuiston JR, Vemulapalli R, Inzana TJ, Schuring GG, Sriranganathan N, Fritzinger D, Hadfield TL, Warren RA, Snellings N, Hoover SM, Boyle SM. Genetic characterization of a Tn5-disrupted glycosyltransferase gene homolog in Brucella abortus and its effect on lipopolysaccharide composition and virulence.
   Infect Immun. 1999 Aug;67(8):3830-5
   PMID: 10417145; UI: 99346167

6. Madonna AJ, Voorhees, KJ, Hadfield TL, Hilyard EJ. Investigation of cell culture media infected with viruses by pyrolysis mass spectrometry: implications for bioaerosol detection. J Am Soc Mass Spectrom
   1999 Jun;10(6):502-11

Abstracts:

1. Hoover DL, Crawford RM, Van De Verg LL, Izadjoo MJ, Bhattacharjee AK, Paranavitana CM, Warren RL, Hadfield TL. Strategies for Vaccination against Brucellosis. NFID Vaccines Meeting, Washington DC. Abstract Number

2. Huo-Shu Houng, Wolf M, Echavarria M, Taylor D, Hadfield TL. Using TaqMan PCR assay to detect LT-A toxin gene from Enterotoxigenic Escherichia coli (ETEC H10407) human volunteer study.

3. Abbas-Hawks C, KJ Vorhees, TL Hadfield. Quantitation of DNA in whole cells by pyrolysis membrane-inlet quadrapole ion trap mass spectroscopy. 47th Am Soc Mass Spectroscopy Conference on Mass Spectroscopy and Allied Topics. Dallas, June 13-17, 1999 TX. Abstract WPI-320

4. Meetani M, Abbas-Hawks C, Miketova P, Vorhees KJ, Hadfield TL. Identification of Biomarkers in Brucella neotomae based on biochemical origin using HR-Py/MS. 47th Am Soc Mass Spectroscopy Conference on Mass Spectroscopy and Allied Topics. Dallas, June 13-17, 1999 TX. Abstract THPI-253

5. Miketova P, Abbas-Hawks C, Vorhees KJ, Hadfield. Micro-organism gram type differentiation based on high resolution mass spectrometry of whole cells. Miketova P, Abbas Hawks C, Vorhees KJ, Hadfield TL. 47th Am Soc Mass Spectroscopy Conference on Mass Spectroscopy and Allied Topics. Dallas, June 13-17, 1999 TX. Abstract THPI-254

Form A Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Naval Research Laboratory (NRL)

a. Center for Biomolecular Science and Engineering
Bldg 30, Rooms, 104, 105, 130, and 401

b. Chemistry Division
Bldg 207, Rooms 133, 135, 161, 184B, 316, 322A

c. Optical Sciences Division
Bldg 703T

2. **Where is it located?**

Address Naval Research Laboratory
4555 Overlook Ave., SW
Washington, DC 20375-5000

Geographical Location: Southwest, Washington, DC

Note: The Naval Research Laboratory is a large multi-facility, multi-disciplined research laboratory of which facilities identified in Item 1 above are a part. Many non-biological programs are conducted at these facilities.

3. **Floor area of laboratory areas by containment level:**

There are no biological containment laboratories in the spaces of the facilities identified in Item 1.

4. **The organizational structure of the facility:**

	Total
I. Total number of personnel:	25
II. Division of personnel	
Military	3.0
Civilian	21.5

III. Division of personnel by category:

Scientists	16.5
Engineers	4.0
Technicians	4.0
Administrative and Support Staff	0.0

IV. List the scientific disciplines represented in the scientific/engineering staff:

Biology
Biochemistry
Chemistry
Chemical Engineering
Engineering
Electrical Engineering
Physics

V. Are contractor staff working in the facility?

There are 14 contractor staff working on cited projects at the facility

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (wholly)

VII. What are the funding levels for the following program areas?

FY99 Funding Levels

Research	$1,265,000
Development	$1,750,000
Test and Evaluation	$0
Total	$3,015,000

VIII. Briefly describe the publication policy of the facility:

Free to publish in various journals, however, level of activity does not generate a significant number of publications

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months:

(1) "Continuous, Rapid Biological Aerosol Detection with the Use of UV Fluorescence: Outdoor Test Results", J. D. Eversole, J. J. Hardgrove, W. K. Cary Jr., D. P. Choulas and M. Seaver, Field Anal. Chem. and Tech., 3, 249-259 (1999).

(2) "Monitoring biological aerosols using UV fluorescence", J. D. Eversole, D. C. Roselle and M. Seaver, Proc. IEEE, 3533, (1999).

(3) "Size and Fluorescence Measurements for Field Detection of Biological Aerosols", M. Seaver, J. D. Eversole, J. J. Hardgrove, W. K. Cary and D. C. Roselle, Aerosol Sci. and Tech., 30, 174-185, (1999).

(4) Anderson, G.P., K.D. King, K.L. Gaffney, and L.H. Johnson (1999). Multianalyte detection using the fiber optic biosensor. Biosensors & Bioelectronics, 14, in press.

(5) Anderson, G.P., K.D. King, D.S. Cuttino, J. P. Whelan, F.S. Ligler, J.F. MacKrell, C.S. Bovais,, D.K. Indyke and R.J. Foch (1999) Biological agent detection using an airborne biosensor. FACT, 3, 307-314

(6) Feldstein, M.J., J.P. Golden, C.A. Rowe, B.D. MacCraith and F.S. Ligler (1999) Array Biosensor: Optical and fluidics systems. J. Biomed. Microdevices, 1, 139-153.

(7) Feldstein, M. (1999) Array biosensors for multi-analyte sensing. Drug Discovery for the New Millenium, K. Rubenstein, ed., IBC Library Series Vol. 1941.

(8) Golden, J.P., C.A. Rowe, M.J. Feldstein, S.B. Scruggs, L.M. Tender and F.S. Ligler (1999) Array-based biosensor for multianalyte sensing. NRL Review, 35-42.

(9) King, K. D., G.P. Anderson, K.E. Bullock, M.J. Regina, E.W. Saaski, and F.S. Ligler (1999) Detecting staphylococcal enterotoxin B using an automated fiber optic biosensor. Biosensors & Bioelectronics, 14: 163-170.

(10) Manos, P.; Pancrazio, J.J., Coulombe, M.G., Ma, W., and Stenger, D.A., Characterization of rat spinal cord neurons cultured in defined media on microelectrode arrays; Neuroscience Letters, 271 (1999), pp. 179-182.

(11) Pancrazio, J.J., Bey, P.P. Jr., Cuttino, D.S., Kusel, J.K., Borkholder, D.A., Shaffer, K.M., Kovacs, G.T.A., and Stenger, D.A. Portable cell-based biosensor system for toxin detection; Sensors and Actuators B, 53 (1998), pp 179-185.

(12) Pancrazio, J.J., Whelan, J.P., Borkholder, D.A., Ma, W., and Stenger, D.A., Development and application of cell-based biosensors; Annals of Biomedical Engineering, 27 (1999), 697-711.

(13) Rowe, C.A. J.P. Golden, M.J. Feldstein, J.J. Cras, K.E. Hoffman and F.S. Ligler (1999) Array Biosensor for detection of biohazards. Biosensors & Bioelectronics, 14, in press.

(14) Rowe, C. A., S.D. Balderson, M.J. Feldstein, J.P. Golden and F.S. Ligler (1999) An array immunosensor for simultaneous detection of clinical analytes. Anal. Chem., 71, 433-439

(15) Rowe, C.A. Tender, L.M., M.J. Feldstein, J.P. Golden, S.B. Scruggs, B. MacCraith, L.M. Tender and F.S. Ligler (1999) Array biosensor for simultaneous identification of bacterial, viral, & protein analytes. Anal Chem, 71, 3846-3852

(16) S.W. Metzger, M. Natesan, C. Yanavich, J. Schneider, and G. Lee, "Development and Characterization of Surface Chemistries for Silicon-Based Biosensors," J. Vac. Sci. Technol. A17, 2623 (1999).

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

The objectives of research at NRL are to develop and test reliable systems for the detection of chemical and biological (CB) warfare agents below incapacitating levels in order to provide the user with early warning and contamination avoidance information

II. Agents:

Apamin
B. anthracis (stern strain, vaccine)
B. abortus (killed only)
Batrachotoxin
Brevotoxin
Charbydotoxin
Cholera toxin
Ciguatoxin
Conotoxin
Diptheriatoxin
Maltotoxin
Ricin
Saxitoxin
Staphylococcus Enterotoxin B
Tetrodotoxin
Tularemia (vaccine strain)

III. Outdoor Studies:

No outdoor biological defense studies are conducted at the Naval Research Laboratory.

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Naval Surface Warfare Center – Dahlgren Division

Building 152, (Rooms 106, 114, 117), Building 196, Building 198 (Rooms 102B, 104,), Building 371, Building 1353, Building 1470 (Room 1611)

2. **Where is it located?**

Address: Naval Surface Warfare Center—Dahlgren Division
17320 Dahlgren Road
Dahlgren, Virginia 22448-5100

Geographic Location: Central-eastern Virginia

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	46
BL2 (sqM)	0
BL3 (sqM)	0
BL4 (sqM)	0
Total (sqM)	46

4. **The organizational structure of the facility:**

I. **Total number of personnel:** 47

II. **Division of personnel:**

Military	0
Civilian	47

III. **Division of personnel by category:**

Scientists	11
Engineers	23
Technicians	10
Administrative and Support Staff	3

IV. List the scientific disciplines represented in the scientific/engineering staff:

Chemistry
Physics
Electronic Engineering
Mechanical Engineering
Software Engineering
Biology
Mathematician
Aerospace Engineer
Analytical Chemistry

V. Are contractor staff working in the facility?

Yes; there are 22 contractor staff working on cited projects at the facility

VI. What is (are) the sources of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (wholly)

VII. What are the funding levels for the following program areas?

Program Areas	FY 99 Funding Levels
Research	$566,000
Development	$5,478,900
Test & Evaluation	$1,276,500
Total	$7,321,400

VIII. Briefly describe the publication policy of the facility:

Employees are encouraged to publish, but must have all publications approved by the Public Affairs Officer

IX. Provide a list of publicly available paper and reports from work during the previous 12 months:

Environmental Air Sampling to Detect Biological Warfare Agents, Publication in MILITARY MEDICINE, Vol. 164, August 1999, by CAPT James Campbell, USN, Stephen Francesconi, PhD, Jennifer Boyd, MS, Lisa Worth, BS, LTC Timothy Moshier, USA

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols:**

I. **Objectives:**

The biodefense programs currently in work at Naval Surface Warfare Center, Dahlgren Division are

(1) The engineering and development of biological detectors,

(2) Computer modeling and simulation capability of biological hazardous agents

II. **Agents:**

None

III. **Outdoor Studies:**

No outdoor biological defense studies are conducted at this facility

Form A: Part 2 (iii)
National Biological Defense Research and Development Program.

III. Facilities

1. **What is the name of the facility?**

Air Force Research Laboratory
Human Effectiveness Directorate
Deployment and Sustainment Division
Operational Toxicology Branch
Chemical and Biological Defense Group

2. **Where is it located?**

HQ SBCCOM
AFRL/HEST
ATTN: AMSSB-AL
E3332 Ricketts Point Road
Aberdeen Proving Ground, MD 21010-5424

Geographic Location: Northeastern Maryland

3. **Floor area of laboratory areas by containment level:**

BL1	213 m^2
BL2	47 m^2
BL3	0 m^2
BL4	0 m^2
Total	217 m^2

Real biological agents are not used in these laboratories. The personnel of this AF group are tenants on an Army post, using Army facilities and following Army rules and regulations.

4. **The organizational structure of each facility.**

I. **Total number of personnel:** 5

II. **Division of personnel:**

Military	2
Civilian	3

III. Division of personnel by category:

Scientists	3
Engineers	1
Technicians	0
Admin and Support Staff	1

IV. List the scientific disciplines represented in the scientific/engineering staff:

Microbiology
Electrical Engineering
Physics
Chemistry
Molecular Biology

V. Are contractor staff working in the facility?

Yes. 4

VI. What is the source of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

US Department of Defense (wholly)

VII. What are the funding levels for the following program areas?

Research Test and Evaluation	$809K/yr
Development	$0

VIII. Briefly describe the publication policy of the facility.

The data produced are published as DoD Technical Reports or in open literature.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

Calomiris, J. J., and J. R. Deeds. Comparison of the particle filtration system with ICR filtration methods for recovery of *Cryptosporidium* from turbid waters. American Society for Microbiology, General Meeting, May 1999, Chicago, Il.

Vercelione-Smith, P., and J. J. Calomiris. Permeabilization of *Bacillus anthracis* spores with protamine. American Society for Microbiology, General Meeting, May 1999, Chicago, Il.

Calomiris, J. J., and J. R. Deeds. Sensitive waterborne pathogen detection using the particle filtration system. American Society for Microbiology, Maryland Branch, June 1999, Baltimore, MD.

Calomiris, J. J., and J. R. Deeds. Detection of waterborne pathogens using the particle filtration system. International Symposium on Waterborne Pathogens, American Water Works Association, August 1999, Milwaukee, WI.

Druger, S., and B. Bronk. 1999. Internal and scattered electric fields in the discrete dipole approximation. Journal of the Optical Society *16*:2239-2246.

Fell, N., R. Pinnick, S. Hill, G. Videen, S. Niles, R. Change, S. Holler, Y. Pan, J. Bottiger, and B. Bronk. 1999. Concentration, size, and excitation power effects of fluorescence from microdroplets and microparticles containing tryptophan and bacteria. *In* J. Leonelli and M. L. Althouse (eds.), Proceedings of the SPIE, Air monitoring and detection of chemical and biological agents.

Efrima, S., B. Bronk, and J. Czege. 1999. Surface enhanced Raman spectroscopy of bacteria coated with silver. *In* J. Leonelli and M. L. Althouse (eds.), Proceedings of the SPIE, Air monitoring and detection of chemical and biological agents.

5. **Briefly describe the biological defense work carried out at the facility, including types of microorganisms and/or toxins studied, as well as outdoor studies on biological aerosols.**

I. Objective:

To develop stand-alone point biological detectors for military bases and aircraft interiors.

II. Agents:

No agents are used at this facility. Studies are done only in US Army laboratory facilities. The USAF, collocated in Army facilities, follows Army regulations. Most of the work involves non-pathogens (BL 1). Work with BL 2 microorganisms is conducted in BL 2 facilities. Any work with BL 3 or BL 4 microoganisms would be conducted at the facilities of the US Army Medical Research Institute of Infectious Diseases located at Ft. Detrick, MD.

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at US this facility

Form A: Part 2 (iii)
National Biological Defense Research and Development Program.

III. Facilities

1. **What is the name of the facility?**

Air Force Research Laboratory, Munitions Directorate

2. **Where is it located?**

Address: 101 W. Eglin Blvd
Eglin Air Force Base, Fl. 32542

Geographical Location: 50 miles east of Pensacola, Florida

3. **Floor area of Laboratory areas by containment level:**

BL1 (sqM)	0
BL2 (sqM)	0
BL3 (sqM)	0
BL4 (sqM)	0
Total	0

4. **The organization structure of each facility:**

The number of people listed below are those that support programs in the Agent Defeat Program.

I. **Total number of personnel:** 8

II. **Division of personnel:**

Military	2
Civilian	6

III. **Division of personnel by category:**

Scientists/Engineers	8
Technicians:	0
Admin and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff.

Mechanical Engineering
Aerospace Engineering
Electrical Engineering
Chemistry

V. Are contractor staff working in the facility?

No

VI. What is the source of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

US Department of Defense (wholly)

VII. What are the funding levels for the following program areas:

Research & Development:	$ 0
Advanced Development:	$1.633M
Small Business Innovation Research	$ 200 K
Total	$1.833M

VIII. Briefly describe the publication policy of the facility:

All publications are reviewed by management prior to release. All Air Force and DoD policies on release of publication are followed.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

No publicly available publications on BW related topics have been generated during the previous 12 months.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

No biological defense work is carried out at this facility. The work described below is offense conventional munitions work that utilizes Bacillus thuringiensis (Bt) as a simulant for biological storage areas that would be a target for the conventional munitions.

I. Objectives.

HPAC

The Hazardous Prediction Assessment Capability (HPAC) program was funded by DTRA under the Collateral Effects Environment (CEE) program. The CEE Program was developing a computer model to support field commander decisions on air strikes against potential biological and chemical targets to minimize the adverse impacts of BW/CW agents. The computer model predicts the results of an attack on a biological/chemical weapon storage facility.

HPAC was to provide experimental data to validate the computer code under development by DTRA for predicting collateral damage resulting from conventional attacks on BW/CW targets. There was no use of actual BW/CW agents, nor is there any development of BW/CW agents related to this program. The BW agent surrogate (*Bacillus thuringiensis*) was employed to characterize the threat. The program began in Jan 94 and is unclassified. The program is now completed.

A report (WL-TR-95-7007) was produced that identified these tests and evaluations by the Wright Laboratory Armament Directorate (WL/MNMW). Testing was conducted on Eglin's test range (Site C-64B).

Agent Defeat:

The Agent Defeat Program has been established to develop technologies to defeat BW/CW storage facilities in hardened targets. The Reusable Target (RUT) was built as a target to test conventional munition concepts and determine their effectiveness against stored BW/CW agents as well as production facilities. Surrogate BW agents are placed inside the RUT in order to determine the effectiveness of the test. Bacillus thuringiensis (Bt) was used in the RUT in Jan 98.

BT has also been stored or worked with in Building 13, Rms 240 and 235, in preparation of the tests on Eglin ranges. It is stored in Rm 240. Bt was mixed with corn meal and loaded into 8 spherical bomblets in Rm 235 for use in the Colt-45 test at the RUT.

Colt-45 Test

The Colt-45 Demonstration Test was conducted in January of 1998 to study the lethality of a high temperature incendiary (HTI) payload against a simulated small-scale biological production plant and chemical processing facility. Subject test was conducted in the ReUsable Target (RUT) located on Eglin's range C-74. The RUT was heavily instrumented to collect data regarding the internal temperatures and pressures to validate the predictive accuracy of computer models under development by the Lethality and Vulnerability Branch. These computer models predict the internal dispersion, neutralization, and external venting of chemical and biological materials that may be released due to conventional blast and fragmentation weapons effects inside targets containing Weapons of Mass Destruction (WMD).

The Colt-45 concept involved replacing the traditional explosive in a BLU-109 penetrating munition with rocket propellant and incorporation of a rocket nozzle on the aft closure. The munition was dropped from the ceiling of the structure (simulating dynamic entry into a room) after rocket motor ignition to observe damage inflicted on a skid-mounted fermentation system and large chemical reactor placed in the test room. The fermentation system contained a commercially available insecticide, Javelin, to serve as a live biological surrogate. Javelin contains the spore *Bacillus thuringiensis* as its active agent. The chemical reactor contained dyed water as a chemical simulant. There was no use of actual BW or CW agents nor was the simulated facility capable of actually producing BW or CW agents. Although most of the Bt was destroyed as a result of the heat during the test, some was released during the test with the likelihood of it being spread in the immediate vicinity of the RUT. The Colt-45 program is now complete.

Colt-46 Demonstration Test:

Colt-46 was conducted in March of 1998 as a follow-on effort to Colt-45. The primary difference was that during Colt-46 the HTI concept was launched into the test room from the adjacent sled track. The test room again contained the biological fermentation system and chemical reactor utilized during Colt-45. Bt was inside the RUT during the test. Bt was released inside the RUT and outside the RUT in the immediate area during the test. In this case, water was placed inside the fermentor to serve as a proper heat sink while the chemical reactor still contained the dyed water from Colt-45. The sled track was used to simulate a high-speed impact with the concrete facility to demonstrate the survivability of the HTI propellant grain to impact loads. There was no use of actual BW or CW agents. The Colt-46 program is now complete.

II. Agents Studied.

None. No agents were used or stored at this facility. A "BW simulant", Bacillus thuringiensis (Bt) was stored in Bldg 13, Rm 240 and used in Bldg 13, Rm 235, Eglin Range Test Areas C-64A and C-74 (RUT).

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility. Only tests utilizing Bt as a target for conventional munitions have been conducted.

Form A: Part 2(iii)

National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

ITT Advanced Engineering & Sciences (Formerly ITT Industries Systems Division) Garden of the Gods facility

2. **Where is it located?**

Address:
Defense Technology Testing and Analysis Division
Colorado Springs Operations
ITT Industries Systems Division
1500 Garden of the Gods Road
Colorado Springs, CO 80907

Geographical location: Colorado Springs, CO

Note Other non-biological programs are conducted at this facility The following data are for the Theater Missile Defense (TMD) Lethality Program efforts to defeat potential biological warheads Relevant activities are conducted in Building 5 only

3. **Floor area of laboratory areas by containment level:**

BL1 (m^2)	N/A
BL2 (m^2)	N/A
BL3 (m^2)	N/A
BL4 (m^2)	N/A
Total Laboratory Floor Area (m^2)	N/A

4. **The organizational structure of each facility.**

Note The following personnel are not dedicated to the biological component of the TMD Lethality Program; a majority of their time is spent on other activities

I.	**Total Number of Personnel**	17
II.	**Division of Personnel:**	
	Military	0
	Civilian	17

III. **Division of personnel by category:**

Scientists	5
Engineers	7
Technicians	3
Administrative and Support Staff	2

IV. List the scientific disciplines represented in the scientific/engineering staff.

Mechanical Engineering
Electrical Engineering
Physics
Computer Science
Mathematics

V. Are contractor staff working in the facility?

Yes. There are the 17 ITT Industries Systems Division personnel identified above. This is a contractor owned and operated facility.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (entirely)

VII. What are the funding levels for the following program areas:

Research	$0
Development	$0
Test and Evaluation	$45,000
Target Production	$0

VIII. Briefly describe the publication policy of the facility.

All programs are considered for publication if not classified by the Government or considered proprietary by industry.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. Objectives:

Fabricate target and provide testing support (such as target hanging and instrumentation) on various activities supporting TMD Lethality

II. Agents:

ITT Industries Systems Division tests no agents. In addition to the fillers (corn starch and aluminum oxide), and only one simulant was included in the targets - Dipel ® Technical Powder (Chemical Name: *Bacillus thuringiensis, var. kurstaki*)

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility

Form A, Part 2 (iii)
National Biological Defense Research and development program

III. Facilities

1. What is the name of the facility?

Battelle Columbus Operations

2. Where is it located?

Address: Battelle
Columbus Operations
505 King Avenue
Columbus, OH 43201-2693

Geographical location: Columbus, Ohio

* NOTE: Other non-biological programs are underway at this facility. The following data is for Agent Neutralization Program efforts to determine data and models describing the neutralization of threat agents to thermal environments.

3. Floor area of laboratory areas by containment level:

BL1 (m2)	400
BL2 (m2)	24
BL3 (m2)	0
BL4 (m2)	0
Total	424

4. The organizational structure of each facility.

I. **Total number of personnel:** 90

II. **Division of personnel:**

Military	0
Civilian	90

III. **Division of personnel by category**

Scientists	32
Engineers	16
Technicians	36

IV. List the scientific disciplines represented in the scientific/engineering staff.

Biochemistry
Biology
Chemistry
Zoology
Chemical Engineering
Materials Engineering
Physics
Taxonomy
Toxicology
Veterinary Medicine

V. Are contractor staff working in the facility?

No

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Department of Defense?

US department of Defense (partly)

VII. What are the funding levels for the following program areas under the Agent Neutralization Program?

Research:	$400,000
Development:	$ 0
Test and Evaluation:	$ 0
Target Production:	$ 0

VIII. Briefly describe the publication policy of the facility.

Battelle strongly encourages publication in peer-reviewed journals. In-house funds are available for this purpose. Battelle considers all programs for publication if not classified by the Government or considered proprietary by industry.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Determine thermal effectiveness on viability of bacteria and vegetative bacteria.

II. Agents:

For bacteria: Bacillus thuringiensis (spore and delta endotoxin)
For vegetative bacteria: Bacillus subtilis var. niger (Bg), and Serratia marcescens (Sm)

III. Outdoor Studies:

Battelle supported DTRA execution of a collateral effects test, Dipole East 169

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Naval Medical Research Center (NMRC), Biological Defense Research Directorate (BDRD)

2. **Where is it located?**

Address:
Armed Forces Radiobiology Research Institute
Naval Medical Research Center
8901 Wisconsin Avenue, Building 42
Director, Biological Defense Research Directorate, Room 1234
Bethesda, Maryland 20889-5607

Geographical Location: Metropolitan Washington D.C.

3. **Floor area of laboratory areas by containment level:**

BL1 (sqM)	283
BL2 (sqM)	100
BL3 (sqM)	35
BL4 (sqM)	0
Total (sqM)	418

4. **The organizational structure of the facility:**

I. **Total number of personnel:** 30

II. **Division of personnel:**

Military	9
Civilian	21

III. **Division of personnel by category:**

Scientists	5
Engineers	0
Technicians	22
Administrative & Support Staff	3

IV. List the scientific disciplines represented in the scientific/engineering staff:

Microbiology
Molecular Biology
Biochemistry
Parasitology

V. Are contractor staff working in the facility?

Yes, there are 20 contractor staff working on cited projects at the facility

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (partly)

VII. What are the funding levels for the following programs areas:

FY99 Funding Levels

Research	$1,500,000
Development	0
Test and Evaluation	0
Total	$1,500,000

VIII. Briefly describe the publication policy of the facility:

Professional scientists are encouraged to publish papers in peer review journals. In-house funds are available for this purpose. All publications must obtain the necessary command permission before submission.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months:

None

5 **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins, as well as outdoor studies of biological aerosols.**

I. Objectives:

Current and past research at BDRD/NMRC has involved basic investigation of the diagnosis of various infectious disease agents and toxins. The goal of the program is the development of rapid diagnostic assays which would increase the rapid detection and diagnosis of infectious diseases potentially evidenced in military troops while deployed in unfamiliar surroundings, especially in those surroundings which do not have access to contemporary health care facilities. Laboratory efforts have been directed toward the development of reagents for diagnostic assays.

II. Agents:

Bacillus Anthracis
Venezuelan Equine Encephalitis
Staphylococcus Enterotoxin B

III. Outdoor Studies:

No outdoor biological defense studies are conducted at the Naval Medical Research Center, Biological Defense Research Directorate.

Form A: Part 2(iii)

National Biological Defense Research and Development Program

III. Facilities

1. **What is the name of the facility?**

Arnold Air Force Base
Hypervelocity Range/Track G

2. **Where is it located?**

Address: 678 Second Street
Arnold AFB, TN 37389-4401

Geographical location: Seventy miles southeast of Nashville, Tennessee

Note: Other non-biological programs are conducted at this facility. The following data are for the Theater Missile Defense (TMD) Lethality Program efforts to defeat potential biological warheads.

3. **Floor area of laboratory areas by containment level:**

BL1 (m^2)	0
BL2 (m^2)	0
BL3 (m^2)	0
BL4 (m^2)	0
Total Laboratory Floor Area (m^2)	0

4. **The organizational structure of each facility.**

I.	**Total Number of Personnel**	28
II.	**Division of Personnel:**	
	Military	
	Civilian	28
III.	**Division of personnel by category:**	
	Scientists	
	Engineers	9
	Technicians	15
	Administrative and Support Staff	4

IV. **List the scientific disciplines represented in the scientific/engineering staff.**

Aerospace Engineering
Mechanical Engineering
Electronic Engineering
Industrial Engineering

V. **Are contractor staff working in the facility?**

Yes. 28 (These persons are included in 4-I, II, III, IV)

VI. **What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Ministry of Defense?**

U.S. Department of Defense (entirely)

VII. **What are the funding levels for the following program areas:**

Research	$0
Development	$0
Test and Evaluation	$70,000
Target Production	$0

VIII. **Briefly describe the publication policy of the facility.**

Papers published may be distributed to U.S. Government agencies and their contractors. Other requests for these documents shall be referred to the U.S. Army Space and Missile Defense Command.

IX. **Provide a list of publicly available papers and reports resulting from work during the previous 12 months.**

None

5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. **Objectives:**

Performed lethality light gas gun impact test to evaluate the lethality of Theater Missile Defense systems against a simulated biological threat.

II. Agents:

The Hypervelocity Range / Track G facility at AEDC tests no agents for TMD Lethality The target used in this test contained the fillers corn starch and aluminum oxide, and only one simulant was included - Dipel ® Technical Powder (Chemical Name *Bacillus thuringiensis*, var *kurstaki*)

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility

ANNEX II

CONFIDENCE BUILDING MEASURE B

EXCHANGE OF INFORMATION ON ALL OUTBREAKS OF INFECTIOUS DISEASES AND SIMILAR OCCURRENCES CAUSED BY TOXINS

UNITED STATES OF AMERICA

APRIL 2000

Form B (1) Backgound Information on Outbreaks of Reportable Infectious Diseases

Disease	1998[*]	1999[†]	2000[§]
AIDS	46,521	44,948	0
Anthrax	0	0	0
Botulism, total	116	151	8
Botulism, Foodborne	22	23	3
Botulism, Infant	65	87	2
Brucellosis	79	64	2
Chancroid	189	51	1
Diphtheria	1	1	0
Gonorrhea	355,642	345,366	16,227
Haemophilus Influenzae	1,194	1,219	69
Hansen Disease	108	104	2
Hantavirus Pulmonary Syndrome	30	26	0
Hepatitis A	23,229	18,010	673
Hepatitis B	10,258	6,678	304
Hepatitis, non-A, non-B[¶]	3,518	3,534	125
Legionellosis	1,355	994	36
Lyme Disease	16,801	14,700	70
Malaria	1,611	1,487	46
Measles	100	91	1
Meningococcal Infections	2,725	2,400	178
Mumps	666	371	11
Pertussis (whooping cough)	7,405	6,526	291
Plague	9	8	1
Poliomyelitis, paralytic	1	0	0
Psittacosis	47	14	0
Rabies, animal	7,259	5,967	210
Rabies, human	1	1	0
Rocky Mountain Spotted Fever	365	587	14
Rubella (German measles)	364	242	1
Rubella, congenital syndrome	7	8	0

Disease	1998[*]	1999[†]	2000[‡]
Salmonellosis excluding typhoid fever	43,694	40,693	1,476
Shigellosis	23,626	17,184	798
Syphilis, primary/secondary	6,993	6,478	332
Syphilis, total all stages	37,977	32,235	1,350
Tetanus	41	34	0
Toxic-shock Syndrome	138	117	9
Trichinosis	19	11	0
Tuberculosis	18,361	15,077	313
Typhoid Fever	375	312	20
Varicella (chickenpox)	82,455	Not Nationally Notifiable	Not Nationally Notifiable

[*] Data final as of August 13, 1999

[†] 1999 provisional totals are cumulative for the year and updated as of February 5, 2000

[‡] 2000 provisional totals are cumulative through February 5, 2000. AIDS data for January 2000 are not yet available.

[¶] Total for Hepatitis, non-A, non-B also includes cases originally reported as Hepatitis C

Source: National Notifiable Diseases Surveillance System (NNDSS), Centers for Disease Control and Prevention, Epidemiology Program Office, Surveillance Systems Branch. NNDSS data might not match data in other CDC surveillance reports because of differences in the timing of reports, the source of the data, and the case definitions.

ANNEX II

CONFIDENCE BUILDING MEASURE B

Exchange of Information on All Outbreaks of Infectious Diseases and Similar Occurrences Caused by Toxins (Form B (ii))

United States of America

April 2000

CONFIDENCE BUILDING MEASURE B

Exchange of Information on All Outbreaks of Infectious Diseases and Similar Occurrences Caused by Toxins (Form B (ii)

NOTHING TO REPORT AT THIS TIME

ANNEX III

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge

United States of America

April 2000

ANNEX III

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and Promotion of Use of Knowledge

See also individual organizations shown in Form A 2 (iii)
for definitive listings of publications

CENTERS FOR DISEASE CONTROL AND PREVENTION

NATIONAL CENTER FOR INFECTIOUS DISEASES

INFORMATION FOR THE PUBLIC AND PUBLIC HEALTH PROFESSIONALS

PUBLICATIONS AVAILABLE

1) Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United State

2) Centers for Disease Control and Prevention Viral/Rickettsial Research Laboratory

3) Child Care in a Changing World

4) Cholera Prevention

5) Defeating Cholera: Clinical Presentation and Management

6) Dengue and Dengue Hemorrhagic Fever: General Information

7) Dengue and Dengue Hemorrhagic Fever: Information for Health Care Practitioners

8) Dengue and Dengue Hemorrhagic Fever: Questions and Answers

9) Division of Bacterial and Mycotic Diseases

10) Division of Vector-Borne Infectious Diseases, NCID

11) Emerging Infectious Disease Threats

12) The Facts About Chronic Fatigue Syndrome

13) Group B Streptococcal Infections

14) Hepatitis A Prevention

15) Hepatitis B Prevention and Pregnancy

16) Hospital Infections Program, NCID

17) How to Prevent Transmission of Intestinal Roundworms from Pets to People

18) Laboratory Methods for the Diagnosis of Vibrio Cholerae

19) Lyme Disease

(20) Prevent Hantavirus Pulmonary Syndrome

(21) Preventing Foodborne Illness: *Escherichia coli* O157:H7 Infection

(22) Preventing Foodborne Illness: Listeriosis

(23) Preventing Malaria in Travelers

(24) Reference and Disease Surveillance Manual

(25) Salmonella enteritidis Infection

ANNEX IV

CONFIDENCE BUILDING MEASURE D

ACTIVE PROMOTION OF CONTACTS

UNITED STATES OF AMERICA

APRIL 2000

FORM D

ACTIVE PROMOTION OF CONTACTS

1. PLANNED INTERNATIONAL CONFERENCES, SYMPOSIA, SEMINARS, AND OTHER SIMILAR FORA FOR EXCHANGE

NONE TO REPORT AT THIS TIME

2. INFORMATION REGARDING OTHER OPPORTUNITIES

NONE TO REPORT AT THIS TIME

ANNEX V

CONFIDENCE BUILDING MEASURE E

DECLARATION OF LEGISLATION, REGULATION AND OTHER MEASURES

UNITED STATES OF AMERICA

APRIL 2000

FORM E

DECLARATION OF LEGISLATION, REGULATIONS AND OTHER MEASURES

RELATING TO MEASURES	LEGISLATION	REGULATIONS	OTHER	AMENDED SINCE LAST YEAR
A) DEVELOPMENT, PRODUCTION STOCKPILING, ACQUISITION OR RETENTION OF MICROBIAL OR OTHER BIOLOGICAL AGENTS, OR TOXINS, WEAPONS, EQUIPMENT AND MEANS OF DELIVERY SPECIFIED IN ARTICLE I	YES/~~NO~~	YES/~~NO~~	~~YES~~/NO	~~YES~~/NO
B) EXPORTS OF MICRO-ORGANISMS* AND TOXINS	YES/~~NO~~	YES/~~NO~~	~~YES~~/NO	~~YES~~/NO
C) IMPORTS OF MICRO-ORGANISMS* AND TOXINS	YES/~~NO~~	YES//~~NO~~	~~YES~~/NO	~~YES~~/NO

*MICRO-ORGANISMS PATHOGENIC TO MAN, ANIMALS AND PLANTS IN ACCORDANCE WITH THE CONVENT

ANNEX VI

CONFIDENCE BUILDING MEASURE F

Declaration of Past Activities in Offensive and/or Defensive Biological Research and Development Programs

United States of America

April 2000

ANNEX VI

CONFIDENCE BUILDING MEASURE F

DECLARATION OF PAST ACTIVITIES IN OFFENSIVE AND/OR DEFENSIVE BIOLOGICAL RESEARCH AND DEVELOPMENT PROGRAMS

NOTHING NEW TO REPORT

ANNEX VII

CONFIDENCE BUILDING MEASURE G

DECLARATION OF VACCINE PRODUCTION FACILITIES

UNITED STATES OF AMERICA

APRIL 2000

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY:

WYETH LABORATORIES, INC

2. LOCATION (MAILING ADDRESS):

P.O. BOX 304
WASP AND BIDDLE STREETS
MARIETTA, PA 17547

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASES COVERED:

ADENOVIRUS VACCINE LIVE, ORAL, TYPE 4
ADENOVIRUS VACCINE LIVE, ORAL, TYPE 7
CHOLERA VACCINE
DIPHTHERIA & TETANUS TOXOIDS ADSORBED
INFLUENZA VIRUS VACCINE
ROTAVIRUS VACCINE, LIVE, ORAL, TETRAVALENT
TETANUS TOXOID
TETANUS TOXOID ADSORBED
TETANUS & DIPHTHERIA TOXOIDS ADSORBED FOR ADULT USE
TYPHOID VACCCINE

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Lederle Laboratories Division
American Cyanamid Company

2. Location (mailing address):

401 N. Middletown Road
Pearl River, NY 10965

3. General Description of the types of diseases covered:

Diphtheria & Tetanus Toxoids & Acellular Pertussis Vaccine Adsorbed
Diphtheria & Tetanus Toxoids & Pertussis Vaccines Adsorbed & Haemophilus b
Conjugate Vaccine (Diptheria CRM_{197} Protein Conjugate)
Diphtheria & Tetanus Toxoids Adsorbed
Haemophilus b Conjugate Vaccine (Diphtheria CRM_{197} Protein Conjugate)
Pneumococcal Vaccine, Polyvalent
Poliovirus Vaccine Live Oral Trivalent
Tetanus and Diphtheria Toxoids Adsorbed for Adult Use
Tetanus Toxoid Adsorbed

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY:

GREER LABORATORIES, INC.

2. LOCATION (MAILING ADDRESS):

639 NUWAY CIRCLE, NE
P.O. BOX 800
LENOIR, NC 28645-0800

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASE COVERED:

PLAGUE VACCINE

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility

   Aventis Pasteur, Inc.

2. Location (mailing address)

   Discovery Drive
   Swiftwater, PA 18370-0187

3. General Description of the types of diseases covered

   Diphtheria & Tetanus Toxoids & Acellular Pertussis Vaccine Adsorbed
   Diphtheria & Tetanus Toxoids Adsorbed
   Influenza Virus Vaccine
   Meningococcal Polysaccharide Vaccine, Groups A,C,Y, W135 Combined
   Tetanus Toxoid
   Tetanus Toxoid Adsorbed
   Tetanus & Diphtheria Toxoids Adsorbed for Adult Use
   Yellow Fever Vaccine

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY

MASSACHUSETTS PUBLIC HEALTH BIOLOGIC LABORATORIES

2. LOCATION (MAILING ADDRESS)

305 SOUTH STREET
BOSTON, MA 02130

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASES COVERED

DIPHTHERIA & TETANUS TOXOIDS ADSORBED
TETANUS TOXOID ADSORBED
TETANUS & DIPHTHERIA TOXOIDS ADSORBED FOR ADULT USE

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY

PARKDALE PHARMACEUTICALS, INC. (A WHOLLY-OWNED SUBSIDIARY OF KING PHARMACEUTICALS, INC.)

2. LOCATION (MAILING ADDRESS)

C/O KING PHARMACEUTICALS, INC.
501 FIFTH STREET
BRISTOL, TN 37620

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASES COVERED:

INFLUENZA VIRUS VACCINE

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY:

BIOPORT CORPORATION

2. LOCATION (MAILING ADDRESS):

3500 NORTH MARTIN LUTHER KING, JR., BLVD.
P.O. BOX 30035
LANSING, MICHIGAN 48909

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASES COVERED:

ANTHRAX VACCINE ADSORBED
DIPHTHERIA & TETANUS TOXOIDS & PERTUSSIS VACCINE ADSORBED
DIPHTHERIA & TETANUS TOXOIDS ADSORBED
DIPHTHERIA TOXOID ADSORBED
PERTUSSIS VACCINE ADSORBED
RABIES VACCINE ADSORBED
TETANUS TOXOID ADSORBED

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY

ORGANON TEKNIKA CORPORATION

2. LOCATION (MAILING ADDRESS)

100 AKZO AVENUE
DURHAM, NC 27712

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASES COVERED

BCG VACCINE

FORM G

Declaration of Vaccine Production Facilities

1. Name of Facility

   Merck & Company, Inc.

2. Location (mailing address)

   P.O. Box 4
   Sumneytown Pike
   West Point, PA 19486

3. General description of the types of diseases covered

   Haemophilus b Conjugate Vaccine (Meningococcal Protein Conjugate) & Hepatitis B (Recombinant) Vaccine
   Haemophilus b Conjugate Vaccine (Meningoccal Protein Conjugate)
   Hepatitis B Vaccine (Recombinant)
   Measles Virus Vaccine Live
   Measles and Mumps Virus Vaccine Live
   Measles and Rubella Virus Vaccine Live
   Measles, Mumps and Rubella Virus Vaccine Live
   Mumps Virus Vaccine Live
   Pneumococcal Vaccine, Polyvalent
   Rubella Virus Vaccine Live
   Rubella and Mumps Virus Vaccine Live
   Varicella Virus Vaccine Live
   Hepatitis A Vaccine Inactivated

FORM G

DECLARATION OF VACCINE PRODUCTION FACILITIES

1. NAME OF FACILITY

NORTH AMERICAN VACCINE, INC.

2. LOCATION (MAILING ADDRESS)

10150 OLD COLUMBIA ROAD
COLUMBIA, MARYLAND 21046

3. GENERAL DESCRIPTION OF THE TYPES OF DISEASES COVERED

DIPHTHERIA & TETANUS TOXOIDS & ACELLULAR PERTUSSIS VACCINE ADSORBED